The Birth Control Pill: Abortifacient and Contraceptive

William F. Colliton, Jr., M.D.

THIS QUESTION is one of the hottest topics in the medical-moral arena. My introduction to this issue occurred at the 1998 midwinter meeting of the American Association of Pro-Life Obstetricians and Gynecologists (AAPLOG). Pamela Smith, M.D., President of the organization, called for the production of a *Principles of Pro-Life Medical and Public Health Practice* manual. She noted that "it has become glaringly apparent that now is the time for us, as an organization, to sail into the dangerous and uncharted waters that we have, perhaps intentionally, avoided. These are the 'waters' of pro-life principles as they relate to fertility control.

"I have intentionally used the words 'fertility control' rather than contraception for a number of reasons. Foremost among them is the moral, biological, and scientific debate that takes place, almost exclusively within the pro-life community, as to whether the mechanisms of certain fertility control measures are contraceptive or actually abortifacient at a microscopic level." In an appendix at the end of this article there appears a list of individuals who join me in commending Dr. Smith for her insight and courage in bringing this issue to the attention of the Board of AAPLOG. We desire to contribute to the debate and witness to the medical and scientific facts that demonstrate the abortifacient nature of the hormonal contraceptives.

At the same midwinter meeting a draft document entitled *Birth Control Pills: Contraceptive or Abortifacient?*[1] was circulated. While this was not advertised as a project of AAPLOG, eight of the signers were or are members of the board of directors. When Dr. Paul Byrne, President of the Catholic Medical Association, learned of this document, he also expressed the view that this paper demands a response, and I agreed to undertake the project.[2]

Near the beginning of their document the opponents of an abortifacient action of the pill state: "We begin with the recognition that

within the Christian community there is a point of view which holds that artificial birth control *per se* is wrong. We would consider this a personal matter of conscience and belief, and this paper is not intended to argue for or against this issue." While admiring the Christian philosophy of the authors, there is another truth to be considered. There is an unarguable logic connecting the contraceptive act and the abortive act. They are both anti-life.[3] To articulate this proposition more fully, the contraceptive action is opposed to the formation of a new life. One does not pop a pill, slip on a condom, take a shot in the buttocks, or do the like in preparation for a game of Chinese Checkers. The only logical reason for these actions is to prevent the formation of a new life while undertaking voluntary coital acts. One might employ condoms in the illusory hope of avoiding sexually transmitted diseases (STD's), but this is Russian roulette revisited with twice the risk of dying if it is AIDS that is the object of one's concern. The greatest witness to the logic of this truth is Planned Parenthood (PP). PP has progressed from being the Western world's number one promoter and provider of contraception to being the number one provider and promoter of induced abortion.

Simple logic demands that those who respect the sanctity of human life from fertilization until natural death should also respect those actions which give rise to that life. They were designed by the same Creator who infuses the soul into each and every new conceptus. As *1 Samuel* 2:6 informs us, "The Lord puts to death and gives life."

Now, are BCPs abortifacient? First, it is important to realize that there exists a large cohort of physicians currently leading our profession in a big lie. These doctors are writing and speaking across the whole nation, selling the idea that the BCP, the IUD, and the "morning after pills" (so-called "emergency contraception") are not abortifacient. Dr. Daniel Mishell, writing in response to a question from a pregnancy aid center about the possibly abortifacient nature of Depo-Provera, replied that there was no way in which this was the case. This agent, he stated, blocks ovulation 100% of the time. It is probably the most effective contraceptive available today, for it prevents pregnancy from 99.5 to 99.7% of the time. When taken as advised every 3 months, approximately 50% of users cease menstruating. This indicates that they are not ovulating and are thus at no risk for pregnancy. The other half bleed

irregularly and at times heavily. But the question that must still be answered is: How is this remarkable success rate achieved? The citation of a .5 to .3% failure rate represents pregnancies. If pregnancies occur, obviously ovulation is occurring. Might not all three mechanisms of action traditionally reported for hormonal contraceptives come into play? Dr. Mishell himself adverts to these three factors when writing contemporaneously and more candidly for medical students and physicians.[4] Others have researched this issue and concluded that all hormonal contraceptives have an abortifacient potential.[5, 6] Neither of these resources has anything to do with the Roman Catholic Church, and so the religious objection to contraception cannot be offered as an explanation for the conclusions of this reserarch. Perhaps the reason that some medical experts state that the IUD, the morning-after pill, and the like are not abortifacient is that they are relying on the (circa 1970) redefinition of pregnancy that declares that pregnancy begins with implantation. But this is not valid reasoning. A woman who has unprotected intercourse at her peak fertility time and conceives a tiny baby boy or girl that begins traveling down her fallopian tube toward her womb cannot be said not to be pregnant. Such a position could only be held in a milieu ready to use violence to solve its problems, a culture of death.

The fact that hormonal contraceptives have an abortive potential is discussed in the paper circulated at AAPLOG's 1998 midwinter meeting.[1] There we find the following explanation:

> Most (virtually all) literature dealing with hormonal contraception ascribes a three-fold action to these agents: (1) inhibition of ovulation, (2) inhibition of sperm transport, and (3) production of a "hostile endometrium," which presumably prevents or disrupts implantation of the developing baby if the first two mechanisms fail. The first two mechanisms are true contraception. The third proposed mechanism, *if* it in fact occurs, would be abortifacient.

The authors then ask about the precise language appearing in the Physician's Desk Reference (PDR) with regard to these agents? "Ortho-Novum: …a progestational effect on the endometrium, interfering with implantation." "Norinyl: ...alterations in...the endometrium (which

reduce the likelihood of implantation)." They claim that this accurately describes the findings in the endometrium of pill users as proven in numerous scientific studies. The findings indicate a "less vascular, less glandular, thinner lining of the uterus produced by these hormones." One of the side effects listed for BCPs is amenorrhea. This means that the endometrium is thinned out completely, resulting in no menstrual flow when on a break from the hormones. The authors then add: "…not one company will offer data to validate the 'hostile endometrium' presumption."

The authors are obviously not familiar with Randy Alcorn's booklet, "Does the Birth Control Pill Cause Abortions?"[6] Randy Alcorn is a Christian minister and researcher who set out to prove that the BCPs are *not* abortifacient. On pages 29-30 he recalls a conversation with a representative of Ortho-McNeil:

> On March 24, 1997, I had a lengthy and enlightening talk with Richard Hill, a pharmacist who works for Ortho-McNeil's product information department. (Ortho-McNeil is one of the largest Pill Manufacturers.) I took detailed notes: Hill was unguarded, helpful and straightforward. He never asked me about my religious views or my beliefs about abortion. He did not couch his language to give me an answer I wanted to hear. I asked him, "Does the Pill sometimes fail to prevent ovulation?" He said "yes." I asked, "What happens then?" He said, "The cervical mucus slows down the sperm. And if that doesn't work, *if you end up with a fertilized egg, it won't implant and grow because of the less hospitable endometrium*" (emphasis in the original). I then asked Hill if he was *certain* the pill made implantation less likely. "Oh yes," he replied. I said, "So you don't think this is just a theoretical effect of the Pill?" He said the following, which I draw directly from my extensive notes of our conversation: "Oh, no, it's not theoretical. It's observable. We know what an endometrium looks like when it's rich and most receptive to the fertilized egg. When the woman is taking the Pill, you can clearly see the difference, based both on gross appearance–as seen with the naked eye–and under a microscope. *At the time when the endometrium would normally accept a fertilized egg, if a woman is taking the Pill it is much less likely to do so*" (emphasis in the original).

To remove any doubt about the effects of the BCP on the endometrium, a review of a classic pathology text is instructive.[7] It is essential to remember that the endometrium, unlike other epithelia (skin for example), does not have a single static "normal" appearance. It has

instead a multiplicity of constantly changing normal patterns that depend upon the nature and intensity of ovarian hormonal stimulation. For reasons of required brevity, descriptions of this tissue will be restricted to the findings on postovulatory day three and the effects of the BCP. Three days after ovulation (the day *in vitro* fertilization specialists prefer to transplant the embryo in normally cycling women) the secretory endometrium is composed of tightly coiled glands lined by vacuolated cells. The vacuoles have assumed a uniform size and are located beneath the nucleus. Things move along rapidly in the normal cycle. By day four the subnuclear vacuoles slip around to the subluminal position. By day five and six the vacuoles have disappeared into the lumen of the gland. The average thickness of the endometrium at this time is 5-13 mm, whereas the average thickness of the endometrium of women on the pill is 1.1mm.[8] In women on BCP, the endometrium is thin and populated by noncoiled or gently coiled thin-calibered glands. The stroma is dense and collagenized, and scattered, thin-walled vessels are present. The changes just described are seen after several months of BCP use. There is a tendency for the endometrium to become progressively thinned. Not uncommonly it consists only of a layer of surface epithelium covering a stroma that is only several cells thick and populated with few or no glands. When such a pattern is observed during the reproductive years, it is almost always a result of long-term use of BCP's. It is instructive that this language describing endometrial atrophy is found in a section titled "Iatrogenic Endometrial Patterns."[7]

A paper by four of the original signers of "Hormonal Contraceptives: Are They Abortifacient?" is not in agreement with these facts.[10] In their view, any BCP cycle in which breakthrough ovulation occurs, the endometrial pattern returns to that of a normal cycling woman, as does an intervening pregnancy if that should occur. They present no scientific evidence in support of this claim, which one might identify as the "light switch effect." On the contrary, Chowdhury *et al.* have demonstrated that the reverse is true.[11] In a study group of 35 sterilized women who were instructed to miss two 30-microgram BCPs in the first treatment cycle and another 19 women to do the same in the fourth cycle, the following findings were observed. Cervical mucus and lateral vaginal wall smears were studied thrice a week. Endometrial biopsy was done on day 23 plus

or minus 2 days. Two serum progesterone levels were determined between day 22 and day 25 of the cycle. Escape ovulation was suggested in 19 of the 35 women in the first group (54%) and in 5 of the 19 in the second group (26%). In all of these women endometrial biopsies did not show any secretory effect (preparation for pregnancy) and the cervical mucus was poor throughout the cycle.

In addition, Randy Alcorn found a paper entitled "The Effect of Oral Contraceptive Pills on Markers of Endometrial Receptivity."[9] The paper was designed to determine if oral contraceptive usage alters expression of the integrins associated with endometrial receptivity. Integrins are a family of heterodimeric cell-adhesion molecules that have been implicated in a number of diverse physiological processes, including fertilization and embryo implantation. The authors found that the expression of those integrins that are most closely associated with endometrial receptivity is altered in the glandular epithelium of women taking OCs. Stromal integrin expression in OC users also differs from that in cycling women. These alterations in epithelial and stromal integrin expression suggest that impaired uterine receptivity is one mechanism whereby OCs exert their contraceptive actions.

The authors repeatedly state that no scientific proof has appeared in the medical literature demonstrating that the pill is abortifacient.[1] They are correct. The reason is that such proof would require collecting, fixing, staining, and serially sectioning all vaginal contents from mid-cycle through menstruation and demonstrating the presence of an early embryo. No one has the time, the money, or the motivation for such an undertaking. In addition, would such a study be morally permissible? We think not. Attempting to prove that any mechanism causes the death of an innocent human individual is an assault on life that is against the fifth commandment. Joel Brind, Ph.D., an internationally known endocrinologist, believes that the abortifacient nature of the pill could be licitly demonstrated using one or more of the very early pregnancy markers available today.[12]

The authors next detail the attributes of the blastocyst and (in support of her or his lack of need for a favorable endometrium) state this thesis: " The blastocyst regularly and successfully implants on tubal ciliated epithelium (commonly referred to as tubal, or ectopic pregnan-

cies)." The authors are, at a minimum, unfamiliar with the literature on ectopic pregnancies.[13] It is very important to realize the relatively high frequency and high success rate of expectant management, that is, careful observation for the treatment of tubal pregnancies. These papers describe 193 cases with 129 successful outcomes (68.8%). Thus, when an unruptured, non-bleeding ectopic is diagnosed, when the size is small (equal to or smaller than 3.5 cm,), when the beta HCG is 1000 or less and falling, non-intervention or expectant management offers freedom from the toxicity of methotrexate and the morbidity of surgery.

Another argument proposed by the proponents of the abortifacient nature of BCP is this: If the Pill has no abortifacient (postfertilization) effect, then the reduction of intrauterine pregnancies (IUPs) in Pill-takers should be identical to the reduction in the rate of extrauterine (ectopic) pregnancies (EUPs) in Pill -takers. Proponents argue that if there is an increased EUP/IUP ratio, this would be strong evidence of an abortifacient effect.[14] The issue of contraception use and the risk of ectopic pregnancy was addressed by an article in *Contraception*.[15] In the body of the paper (p.339) Mol *et al.,* who conducted a meta-analysis on numerous papers between the years 1978 and 1994, observe that "[c]ondom use shows no increased risk. OCs show a slightly increased risk, in contrast to IUCD use and tubal sterilization, which show a strongly increased risk."

The authors' suggestion about the lack of need of the blastocyst for a well-prepared endometrium came as somewhat of a surprise. From the first year of their studies and throughout their training, medical students learn about the normal ovarian cycle and of its impact on the endometrium. Under the influence of estrogen derived from the developing follicle, the endometrium undergoes remarkable growth during the first half of the month (the proliferative phase). Under the influence of the leuteinizing hormone, the follicle that has grown the most bursts, releasing the egg (ovulation). The cells lining the wall of the now empty follicle (the corpus luteum) now begin to produce another hormone, progesterone, which prepares the uterus for pregnancy. The endometrium becomes much more lush, rich in blood supply and nutrients, ready to receive a tiny girl or boy. This is the type endometrium desired by IVF practitioners to accomplish embryo transfer

from the petri dish to the womb, the most difficult technological step to accomplish in that variety of artificial reproduction.

The next question raised by the authors is this: "Is there actual clinical evidence of early miscarriage in pill users?[1] They note that the typical clinical picture of spontaneous abortion (heavy bleeding, severe cramping, passage of tissue) is rarely, if ever seen by practicing physicians caring for patients on the Pill. They seem to overlook the facts that the abortions caused by BCP occur when the baby is 5 to 14-16 days old and that the lining of the uterus is "less vascular, less glandular, thinner" than normal as they described it. From the clinical perspective, one would anticipate, just as in over 60% of ectopic pregnancies, a non-event. From the moral perspective, however, it is quite another story. What we are witnessing here is a tragic loss of children of God who are totally innocent and made in His image. It is well to remember that, from the moral perspective, the numbers don't matter. If one child is lost, the tragedy isn't lessened.

The authors ask: "What is the conception rate for women on hormone contraception?" They answer correctly that it is impossible to say. However, earlier in their paper they noted, quite accurately, that the medical literature documents an incidence of 3-5 pregnancies per 100 women per year for Pill users. Dr. Don Gambrell, Jr., a renowned gynecological endocrinologist, addressed this issue during the educational segment of this same meeting. He noted a 14% incidence of ovulation in women taking the 50 microgram BCP. This rate varies from pill to pill and from patient to patient. Now, every case of fertilization that does occur in women on the pill, in which the pill has made it difficult or impossible for there to be implanation, contradicts the thesis of those stating that the BCP is not abortifacient. Simple logic would suggest that many more than the clinically diagnosed pregnancies that occur are aborted because of the acyclic, unfavorable-for-implantation endometrium. If IVF practitioners relied on an endometrium that is "less vascular, less glandular, thinner" than that ideal for implantation, their success rate would approach zero today rather than the tens of thousands of babies born of that technology.

Let's look at the math. Women on BCPs have 28-day cycles and thus have 13 cycles/year (365/28 = 13.3). According to *Facts in Brief*

from the Alan Guttmacher Institute (3/13/98), some 10,410,000 U.S. women are current pill users, a figure that constitutes 26.9% of all those using some method of contraception. This is second only to sterilization, which is used by 27.7% of contraceptors. Gambrell notes that there is a 14% breakthrough ovulation rate in females taking the 50 microgram pills (10,410,000 x .14 = 1,457,400 ovulations each cycle). 1,457,400 x 13 cycles/year = 18,946,200 possible exposures to pregnancy each year. The accepted rate for "pill pregnancies" is 3-5 per 100 women years. Noting the fact that there is 60+% rate of spontaneous tubal abortions with an unfavorable implantation site in ectopic pregnancies, it is reasonable for us to calculate that the rate of conceptions lost to early physician-induced (BCP) abortion of intrauterine pregnancies in pill users is twice that of term "pill pregnancies," given once again, an endometrium that is "less vascular, less glandular, thinner" than normal. Thus the possible abortion-rate induced by BCPs is 18,946,200 x .06 = 1,136,772 or 18,946,200 x .1 = 1,894,620/ year. We are convinced that the reasoning with regard to the math on this issue is sound.

Dr. Murphy Goodwin was asked to review this reasoning.[16] He wrote: "It is possible that there are more than a million such losses per year but a reasonable calculation could also put the loss rate at one tenth of that number. He added: "I believe (1) that it is most likely that the total number of excess fetal losses (abortions) due to the combined pill is in the range of several hundred thousand, substantially less than the number of elective abortions annually and (2) the fact that this is not the intended effect of the pill in most cases and that the effect in any one circumstance is unknowable makes the ethical issues much more complex than those surrounding elective abortion. The educational and political challenge of elective abortion is much more straightforward and is a necessary prerequisite of undertaking the more complex moral issue of the abortifacient effect of the pill." These sound thoughts deserve the prayerful reflection of all right-to-lifers. Using a normal fecundity rate of 20% and other scientifically sound variables, Dr. Goodwin arrived at pill induced abortions totals between 104,100/year and 1,561,500/year. Curiously his high number is approximately half-way between our two calculations. His low number is not insignificant. We must also remember that with RU486 and methotrexate, chemical and hormonal

killing of the preborn may one day make surgical abortion look pale in the shade. We should also recall that a figure of 10-15% represents a conservative estimate of spontaneous early abortions in normally cycling females desirous of pregnancy and favored with a delicately balanced reproductive cycle as designed by God. To state or feel that BCP consuming females experience a 0% rate of physician induced abortion (from the pill) is wishful thinking of the highest order.

Great gratitude is due to Chris Kahlenborn, M.D., a young internist from Kettering, OH. Dr. Kahlenborn took a sabbatical to write a book entitled *Breast Cancer: Its Link to Abortion and the Birth Control Pill* (Dayton: One More Soul, 2000). One of his references clearly indicates that even the pro-abortionists recognize that the pill is abortifacient.[17] *The New York Times* carried a transcript of the oral arguments in the Supreme Court case of *Webster v. Reproductive Health Services*, in the course of which the following dialogue between Frank Susman, a lawyer for the Missouri abortion clinics, and Justice Scalia is recorded:

Mr. Susman: For better or worse, there no longer exists any bright line between the fundamental right that was established in *Griswold* and the fundamental right of abortion that was established in *Roe*. These two rights, because of advances in medicine and science, now overlap. They coalesce and merge and they are not distinct.

Justice Scalia: Excuse me, you find it hard to draw a line between those two but easy to draw a line between (the) first, second, and third trimester.

Mr. Susman: I do not find it difficult.

Justice Scalia: I don't see why a court that can draw that line can't separate abortion from birth control quite readily.

Mr. Susman: If I may suggest the reasons in response to your question, Justice Scalia. The most common forms of what we most generally in common parlance call contraception today, IUDs, low-dose birth control pills, which are the safest type of birth control pills available, act as abortifacients. They are correctly labeled as both. Under this statute, which defines fertilization as the point of beginning, those forms of contraception are also abortifacients. Science and medicine refer to them as both. We are not still dealing with the common barrier methods of *Griswold*. We are no longer just talking about condoms and diaphragms. Things have changed. The bright line, if there ever was one, has now been extinguished. That's why I suggest to this Court that we need to deal with one right, the right to procreate. We are no longer talking about two rights.

In company with those listed in the appendix to this article, I believe that the facts as detailed here indicate the abortifacient nature of hormonal contraception. This is supported by the scientific work of the Alan Guttmacher Institute, which can in no way be confused with a right-to-life organization. There is no desire here to cause confusion and division among pro-life forces. It is simply important that all women using the pill are truthfully and fully informed about all its modes of action.[18, 19]

APPENDIX

Marie A. Anderson, M.D., FACOG
Tepeyac Family Center
Fairfax VA 22033

Paddy Jim Baggot, M.D.
Geneticist, Perinatologist
Pope Paul VI Inst., Omaha NE

Thomas L. Bodensteiner, M.D., FACOG
Beatrice NE

John J. Brennan, M.D., FACOG
Assoc. Clinical Professor of
Obstetrics and Gynecology
Medical College of Wisconsin

John T. Bruchalski, M.D.
Diplomate, American Board of
Obstetrics and Gynecology
Medical Director, Tepeyac Family Center, Fairfax VA

Kim Anthony Hardey, M.D.
Diplomate, American Board of
Obstetrics and Gynecology
Lafayette LA

William F. Colliton, Jr., M.D., FACOG, Clinical Professor of
Obstetrics and Gynecology
George Washington University
Medical Center (ret.)

Lorna L. Cvetkovich, M.D., FACOG, Wichita KS

Mary L. Davenport, M.D., FACOG, El Sobrante CA

Charles H. Dahm, M.D., FACOG, St. Louis MO

Michael B. Dixon, M.D.,FACOG, Dip. ABFP, St. Louis MO.

Hans E Geisler, M.D., FACOG, FACS, Dir. of Gyn. Oncology, St Vincent Hosp.& Health Centers, Clin.Prof. Obst.and Gynecology, Indiana Univ. Medical Center

David R. Harnisch, Sr., M.D., F.A.A.F.P., J.F.A.C.O.G.
Beavercreek OH

John F. Heffron, M.D., FACOG
Clinical Professor of Obstetrics and Gynecology, Creighton University School of Medicine

Steve Hickner, M.D., FACOG
Asst. Professor, Dept. of Obstetrics and Gynecology
Mich. State School of Medicine

Thomas W. Hilgers, M.D.
Senior Medical Consultant, Pope Paul VI Institute, Associate Clinical Professor of Obstetrics and Gynecology, Creighton Univ. School of Medicine

William J. Hogan, M.D., FACOG
Rockville MD

Helen T. Jackson, M.D., FACOG
Brookline MA

James Linn, M.D.
Associate Clinical Professor, Obstetrics and Gynecology
Medical College of Wisconsin

John C. Linn, M.D., FACOG
Milwaukee WI

Julie Mickelson, M.D., FACOG
Board Member, AAPLOG

Bernard N. Nathanson, M.D., FACOG, Perinatologist
New York NY

James O'Connor, M.D.
Diplomate, ABOG
Manager, Ernst and Young Health Care Consulting

Konald A. Prem, M.D., FACOG
Professor Emeritus, Dept. of Obstetrics and Gynecology
Univ.of Minn. Medical School

Gary W. Smith, M.D., FACOG
Medical Director, Women's Health at Robin Wood

Mark Stegman, M.D., FACOG
St. Louis MO

Arthur J. Stehly, M.D., FACOG
Escondido CA

EPILOGUE

Ever since becoming involved in this debate in the first months of 1988, I have been curious about why the discoverers of the birth control pill (BCP) from the earliest days of their work have described three mechanisms of action for their products: inhibition of ovulation, thickening of the cervical mucus (both of which are contraceptive actions), and endometrial changes that make implantation unlikely (an abortifacient action). Did they animal or human studies to prove this? Apparently not, for they have suggested that this third mode of action was merely a marketing ploy to insure women of the complete effectiveness of the BCP.[1] In October of 1999 I had the privilege of meeting Elora J. Weringer, Ph.D., a biologist with connections to the Pfizer Company. I inquired of her the location of the early studies of Gregory Pincus, D.Sc. and of John Rock, M.D. She referred me to the Worcester Foundation for Experimental Biology, located in Worcester MA. Subsequent telephone inquiries have revealed that the Foundation had broken up into several entitites but that none of the librarians whom I contacted had any information about the location of Dr. Pincus's early studies. Then the Holy Spirit entered the science.

Prof. Janet Smith of the University of Dallas provided a copy of an article by Barbara Seaman entitled "The Pill and I: 40 Years On, The Relationship Remains Wary" (*The New York Times*, June 25, 2000). The Pill, Seaman explains, was the brainchild of Margaret Sanger, the founder of Planned Parenthood and an indomitable fighter for women's rights. About 1950 she was introduced to Gregory Pincus, a reproductive scientist, and with approximately $150,000 that she raised (mostly from her friend, Katherine McCormick, an heiress to a farm-machinery fortune) she urged Pincus to start work on a universal contraceptive. Twenty years earlier researchers had established that hormones could prevent ovulation in rabbits and other species. Seaman notes that Pincus was interested in a progesterone-only pill because he was wary of estrogen, for it was already understood to increase cancer risks. "But there is a problem with progesterone-only contraceptives," she adds, "they produce irregular and unpredictable spotting or, conversely, a complete absence of menstruation." This she labels "menstrual chaos."

Pincus eventually put estrogen back into the BCP.

How did Seaman learn all this? She has made a study of Pincus's papers, which are now housed in the Library of Congress. "They comprise approximately 44,000 items, filling 213 containers on 85.2 feet of shelf-space. They reveal an awesome scientific and entrepreneurial brinksmanship and make one wonder why Pincus didn't burn the evidence." It is sordid. Gregory Pincus was the steroid guru of his day and was internationally acclaimed. The four boxes which I was able to review (#93, 107, 142, and 145) were most revealing.

With regard to the issue of the abortifacient nature of the BCP, the correspondence Pincus received from Albert Segaloff, M.D. (Dated September 4, 1964) is enlightening. Apparently an editor for the international journal called *Steroids*, he writes: "Dear Goody, I am enclosing your manuscript on 'Further Studies on Implantation Inhibitors.' I want to thank you for submitting this most fascinating paper on a very interesting series of compounds to *Steroids*." The opening paragraph of this paper (co-authored by Upendra K. Baink and J. Jacques of the Worcester Foundation for Experimental Biology and the College de France) reads: "Twenty-three compounds injected on day 1 or days 1 through 3 of pregnancy in rats have been tested as possible inhibitors of implantation. Among them eight have proven active at total doses of 1.5mg per rat or less. Administration of some of the active compounds by gavage has also led to implantation inhibition. The group of compounds found to be active were also the most potent in uterotrophic assay in immature mice. Among them, a highly active compound, A-norandrostane-2α, 17α-diethyny2*b*-diol (V) has been examined in detail. It appears to act primarily by causing expulsion from Fallopian tubes and uterus of the free, pre-implantation ova, and was ineffective in the usual sterilizing dose in terminating implanted embryos."

In 1965 in the WHO Technical Report Series No. 303 there appeared an article entitled "Mechanism of Action of Sex Hormones and Analogous Substances" (subtitled "Report of a WHO Scientific Group), which reads (p.17): "Both the steroid hormones and the synthetic analogues, when used during long periods, have effects on the reproductive tract that needs evaluation. In the normal female, endogenous hormones are secreted cyclicly (*sic*), involving the interrelated rise and

fall of estrogen and gestogen; this seems to be a protective mechanism of considerable significance. If there is continuous exposure to even lose doses of oestrogens, either endogenous or exogenous, pathological effects are produced, the endometrium becoming hyperplastic. On the other hand, if progestogens and gestogens are given continuously at even low levels, amenorrhea and sterility result, with regression of the endometirum to a thin layer having scant if any secretory activity." This finding has been known for a long time.

In Pincus's files was a paper by Prof. L.T. Samuels, a temporary member of the WHO Scientific Group, which notes: "Excess oestrogens can interfere with either fertilization, blastocyst formation, or implantation, depending on the time after ovulation when the high level occurs" (p. 5). Later on the same page he adds, "The retention and rate of development of the blastocyst *in utero* has long been known to be progesterone-dependent. Oestrogens inhibit the blastocyst-simulating effect of progesterone. It is, of course, well known that excess oestrogens prevent implantation, just as they prevent gestogen-induced deciduoma formation in experimental animals." I found several other references verifying these findings, but sufficient to clinch the case for the abortifacient nature of sex steroids under certain circumstances is another letter to Dr. Pincus (dated July 14, 1954) from Victor A. Drill, M.D., Director of Biological Research for G.D. Searle & Co., which contains this note: "We will not send any compounds for anti-ovulatory or anti-implantation tests this month. If you need any for the following month, this, of course, will be indicated on your list of requested numbers of compounds."

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16. E. Murphy Goodwin, M.D.,FACOG, personal communication (4/23/98).
17. *The New York Times* (Thursday, April 27, 1989) p.B13. A transcript of the Supreme Court Case of *Webster v. Reproductive Health Services.*
18. The signatories listed in the appendix did not sign on to this paper but to the paper by the same author listed in note 2 above. All of these physicians are pro-life and board-certified obstetricians and gynecologists. The message in both papers is identical.
19. The author was privileged to present this paper to the Boston Guild of the Catholic Medical Association on March 25, 2000, at which Jenny Driver, M.D., then a Level II resident in obstetrics and gynecology in the Harvard Medical School program, rose to state that she had been taught in medical school that the BCP is an abortifacient. She is a graduate of the University of Pittsburgh School of Medicine.