

THE YEAR BOOK *of*  
OBSTETRICS  
*and*  
GYNECOLOGY  
1968

# THE YEAR BOOK *of* OBSTETRICS *and* GYNECOLOGY 1968

---

EDITED BY

J. P. GREENHILL

B.S., M.D., F.A.C.S., F.I.C.S. (Honorary), F.A.C.O.G.

*Professor of Gynecology, Cook County Graduate School of Medicine; Attending Gynecologist, Cook County Hospital; Senior Attending Obstetrician and Gynecologist, Michael Reese Hospital; Associate Staff, Chicago Lying-in Hospital; Author of OFFICE GYNECOLOGY, SURGICAL GYNECOLOGY, OBSTETRICS IN GENERAL PRACTICE, OBSTETRICS (13th ed.) and ANALGESIA AND ANESTHESIA IN OBSTETRICS*

---

YEAR BOOK MEDICAL PUBLISHERS

INCORPORATED

35 EAST WACKER DRIVE

CHICAGO

## THE PRACTICAL MEDICINE YEAR BOOKS

► There are nineteen YEAR BOOKS in various fields of medicine and one in dentistry. Publication of these annual volumes has been continuous since 1900. The YEAR BOOKS make available in detailed abstract form the working essence of the cream of recent international medicoscientific literature. Selection of the material is made by distinguished editors who critically review each year more than 500,000 articles published in the world's foremost journals.

**Medicine:** DAVID E. ROGERS, M.D.; CARL MUSCHENHEIM, M.D.; WILLIAM B. CASTLE, M.D.; T. JOSEPH REEVES, M.D.; FRANZ J. INGELFINGER, M.D.; PHILIP K. BONDY, M.D.; FRANKLIN H. EPSTEIN, M.D.

**General Surgery:** MICHAEL E. DE BAKEY, M.D.

**Anesthesia:** STUART C. CULLEN, M.D.

**Drug Therapy:** HARRY BECKMAN, M.D.

**Obstetrics & Gynecology:** J. P. GREENHILL, M.D.

**Pediatrics:** SYDNEY S. GELLIS, M.D.

**Radiology:** JOHN FLOYD HOLT, M.D.; WALTER M. WHITEHOUSE, M.D.; HOWARD B. LATOURETTE, M.D.

**Ophthalmology:** WILLIAM F. HUGHES, M.D.

**Ear, Nose & Throat:** JOHN R. LINDSAY, M.D., with a section on *Maxillo-facial Surgery*, by DEAN M. LIERLE, M.D.

**Neurology & Neurosurgery:** RUSSELL N. DE JONG, M.D.; OSCAR SUGAR, M.D.

**Psychiatry & Applied Mental Health:** SAM BERNARD WORTIS, M.D., *et al.*

**Dermatology:** ALFRED W. KOPF, M.D.; RAFAEL ANDRADE, M.D.

**Urology:** JOHN T. GRAYHACK, M.D.

**Orthopedics, Traumatic & Plastic Surgery:** H. HERMAN YOUNG, M.D.; NEAL OWENS, M.D.

**Endocrinology:** THEODORE B. SCHWARTZ, M.D.

**Pathology & Clinical Pathology:** WILLIAM B. WARTMAN, M.D.

**Nuclear Medicine:** JAMES L. QUINN, III, M.D.

**Cancer:** RANDOLPH LEE CLARK, M.D.; RUSSELL W. CUMLEY, Ph.D.

**Cardiovascular Medicine & Surgery:** EUGENE BRAUNWALD, M.D.; W. PROCTOR HARVEY, M.D.; JOHN W. KIRKLIN, M.D.; ALEXANDER S. NADAS, M.D.; OGLESBY PAUL, M.D.; ROBERT W. WILKINS, M.D.; IRVING S. WRIGHT, M.D.

COPYRIGHT 1968 BY YEAR BOOK MEDICAL PUBLISHERS, INC.

Printed in U.S.A.

## TABLE OF CONTENTS

The material covered in this volume represents literature reviewed up to May, 1968.

PRESIDENTIAL AND OTHER ADDRESSES . . . . .	5
BRIEF INTERESTING NOTES . . . . .	19

### OBSTETRICS

PREGNANCY . . . . .	28
Immunology of the Conceptus, by S. J. BEHRMAN and ZEEV KOREN . . . . .	28
Physiology . . . . .	48
Abortion and Ectopic Pregnancy . . . . .	75
Complications . . . . .	108
The Toxemias . . . . .	164
LABOR . . . . .	174
Oxytocics and Induction of Labor . . . . .	174
Analgesia and Anesthesia . . . . .	184
Complications . . . . .	195
Operative Obstetrics . . . . .	203
Hemorrhage . . . . .	228
The Placenta and Appendages . . . . .	237
PUERPERIUM . . . . .	251
THE NEWBORN . . . . .	264
Intrauterine Growth Retardation, by WILLIAM OH . . . .	264

### GYNECOLOGY

GENERAL PRINCIPLES AND DIAGNOSIS . . . . .	323
--	-----

ENDOCRINOLOGY . . . . .	332
INFERTILITY . . . . .	353
PELVIC INFECTIONS . . . . .	399
ANOVULATION . . . . .	414
OPERATIVE GYNECOLOGY . . . . .	439
MENSTRUAL DISORDERS . . . . .	479
Vaginal Cytology in the Menopause, <i>by</i> WINIFRED LIU . . .	479
BENIGN TUMORS . . . . .	508
MALIGNANT TUMORS . . . . .	522
THE BREASTS . . . . .	602

## PRESIDENTIAL AND OTHER ADDRESSES

Marchetti (Am. J. Obst. & Gynec. 99:599, 1967) delivered the presidential address before the American Gynecological Society. His subject was "Today's Vista of Obstetrics-Gynecology." He said that in the entire universe, currently, whether it be in a community, municipality, state or nation, we are confronted with social, economic, emotional, governmental, educational and cultural upheavals. These are the main sources which are putting pressure on medicine. During the past two decades, the image of our specialty has been repeatedly reputed to be generally poor. For the most part, the criticism that has been directed to obstetrics-gynecology has been justified, especially when it concerns the lag it has endured in basic science research. However, no specialty in medicine has made a more honest and genuine effort to evaluate its own shortcomings and deficiencies than ours. The organization of our relatively newer societies and associations has consolidated the strength of our specialty immeasurably. No one organization or discipline is any longer an island unto itself. We must cooperate and consolidate our efforts to meet with strength the influences and the stresses that governmental agencies are exerting on all branches of medicine. We must consider the variations and the experiments that are affecting the undergraduate, graduate and postgraduate curricula. Self-evaluation to revitalize the fulfillment of our goals must come from within our own specialty and organizations. In developing our neophytes, a sound balance between the position dedicated to clinical experience, investigation and teaching must be properly reached with those of us dedicated to basic scientific research. The newer emphasis on the inclusion of demography, sex education, family planning, cytogenetics and above all the biology of human reproduction is already making a great impact on the curricula of medical education and especially on obstetrics-gynecology. Our responsibilities and demands will grow, and inevitably our stature, if the realization of the specially trained primary or family physician comes to pass. The latter is going to have to be equipped with the basic principles of practicing obstetrics and gynecology, pediatrics, psychiatry, anesthesia, resuscitation and the behavioral sciences. Obstetrics-gynecology is faced with a graver charge and responsibility than it has ever had before. We must not falter. We are compelled to meet the rapidly occurring changes of this generation by expanding our research facilities, by increasing our teaching staffs and paramedical personnel, by revamping our curricula and by better teaching, producing better obstetricians-gynecologists.

Reid's inaugural address (Obst. & Gynec. 30:269, 1967) before the American College of Obstetricians and Gynecologists was "To Everything There Is A Reason." He pointed out that one quarter of the world's population is undernourished and another quarter malnourished and that the greatest world-health needs reside in the

realm of maternal and child care. The maternal mortality rate is four times higher for nonwhite than white population, and the difference continues to increase. Despite our affluence, at least 25% of patients receive little or no prenatal care. We accept albeit with some reservation, that perinatal mortality is higher in the United States than in several countries. We know that 4,000,000 individuals, many mentally retarded, have damaged nervous systems since birth. The incidence of these handicaps could be massively reduced through identification and special treatment of the "high-risk" pregnancy, particularly as it relates to the prevention of premature birth. We know that cervical cancer which is the second most frequent malignancy in women, with an estimated 40,000 new cases and 14,000 deaths each year, can be largely eradicated if women are periodically examined and properly treated. We also know that the birth rate is falling; but even if it falls to a figure of 15 per 1,000, there will be an increase in the next decade of 500,000-700,000 births over the present annual figures. By reason of this over-all situation, the federal government has given maternal and child care a high priority in its medical programs and proposes to provide comprehensive care for all children as their national right. Reid proposes that programs, particularly where federal funds are at stake, should be developed about those hospitals and medical schools that are prepared to meet the challenge. This means, among other things, that the hospital and the staff possess certain standards of excellence. As with research support, much of the funding should come directly to the institutions and medical schools involved rather than the maze that often confronts the federal government locally. Reid then discussed five subjects: the medical school, ambulatory health facility, health team, regional planning, and recruitment. The American College has an enormous and awesome responsibility, a responsibility that is becoming even greater as the obstetrician-gynecologist assumes a greater role in the health of women. Within its membership, there reside the ultimate answers to the standards and caliber of care that will prevail. Reid is uncertain whether the government fully appreciates it or if our other medical colleagues believe it to be true.

Collins (*Fertil. & Steril.* 18:434, 1967) in his presidential address before the American Fertility Society spoke on "A Time to Every Purpose." This topic was conceived from passages in the book of Ecclesiastes (the order of these passages was changed to meet the need), "There is a time to every purpose under the heavens. . . ." ". . . a time to keep silence and a time to speak. . . ." ". . . a time to plant and a time to pluck up that which was planted. . . ." The computer is assuming a more important role in patient care and is actually competing with the physician in his care. The weakest link in this efficient, impersonal, accelerated system of medical care is that it deprives the patient of what she may most desire—the time and opportunity to discuss her personal problems with an understanding and sympathetic physician. There is no area in medicine more conducive to an intimate personal doctor-patient relationship than obstetrics and gynecology. This is particularly so in the realm of

infertility. The patient comes for the first time not for what she has but for what she wants. She comes as a composite female whose physical, reproductive and psychosexual components require evaluation. She is likely to be beset by all manner of tensions, frustrations, guilt reactions and anxieties. No computer can replace the quiet, unhurried, relaxed atmosphere of a consultation room where fears and anxieties are countered with tact, compassion and professional skill. The most important element in a rewarding investigation of infertility is the time to do it and the most important time, the first visit. Even though the obstetrician-gynecologist may not examine the husband, he should take time for a separate conference with him and finally arrange a joint one with husband and wife where the results of the study, prognosis and treatment are discussed. Collins is convinced that it is to the best interest of the patient for the doctor who has successfully managed her infertility study to continue her obstetric care and delivery. One of the main functions of the American Fertility Society should be to stimulate the interest of doctors in the important phase of total care of the reproductive function of women.

Keettel's presidential address (*Am. J. Obst. & Gynec.* 98:297,1967) before the Central Association of Obstetricians was "The Road Ahead." He said of major importance was the impact of our specialty on the undergraduate, both from an educational experience and from its recruitment value. The clinical curriculum has changed materially in the past 20 years from one characterized by a series of didactic lectures given during the last 3 years of medicine with minimal patient contact to one that is patient-oriented with few, if any lectures, a clinical clerkship varying from 6-12 weeks with small group discussions. Faculties of obstetrics and gynecology need not only excellent clinicians but also physicians with basic science interests and training so they may participate with the basic scientists in the introductory presentation of the principles of female reproduction. We must convince our colleagues in other disciplines that obstetrics and gynecology is a fundamental science necessary for the broad education of every physician. We must also convince members of our own specialty and colleagues that there is more to our discipline than the delivery of a baby and the performing of a hysterectomy. Departmental status of obstetrics and gynecology must be maintained, even though certain medical administrators would like to eliminate or consolidate certain specialty groups so they might deal with a smaller number of administrative units. To have a balanced department undergraduate and graduate instruction, research and clinical care of patients must be equally and expertly executed, but we can no longer expect each individual staff member to excel in all three areas. Individuals must be encouraged and rewarded for excellence in teaching and clinical competence, provided they are provocative, inquisitive and willing to do clinical research. We must not force physicians with these inherent interests to become pseudolaboratory scientists for the sake of a National Institute of Health grant or promotion. Perhaps the most complex problem facing us today is that of graduate training. Within the past



3 years there has been a dramatic shift away from the traditional rotational internship toward either a mixed or straight program. It seems logical that every residency program should have at least one full-time obstetrician-gynecologist who is interested in graduate education on the staff. Another important factor which will change the concepts of resident training is the impact of governmental insurance programs. As these programs develop, the true charity patient will disappear and every patient will be potentially a private patient. Physicians in private practice must be willing to support medical schools and teaching hospitals by referring sufficient patients for teaching material. There are many clouds on the horizon. One of these is the cost of maternity care with the spiraling hospital expenses and the frequency of poor insurance coverage. The advantages of obstetricians and gynecologists working in groups must be emphasized to our profession and to the lay public. The road ahead will not be easy.

Kight (Am. J. Obst. & Gynec. 99:888, 1967) presented the presidential address before the South Atlantic Association of Obstetricians and Gynecologists and spoke on "John Peter Mettauer and the first successful closure of vesicovaginal fistula in the United States." Mettauer, in March, 1840, wrote to the Editor of the *Boston Medical and Surgical Journal* concerning the vesicovaginal fistula operation which he performed. Many years later Thomas, in his book *Diseases of Women*, stated that there could be no question that the three elements necessary for the successful treatment of a vesicovaginal fistula were (1) a means of exposing the fistula to view and manipulation, (2) a suture that would remain in place without causing inflammation and (3) a means of disposing of urine during the process of cure. Mettauer used (1) the lithotomy position and a bivalve speculum, (2) leaden sutures and (3) a retention catheter of his own design; hence Mettauer fulfilled the requirements stipulated by Thomas for success. Sims, in his autobiography, admitted that he knew of Mettauer's work with leaden sutures. Mettauer was also a great plastic surgeon, and his interest in obstetrics is displayed in writings on the prophylactic treatment of puerperal fever and the prevention of spread of pelvic peritonitis. Mettauer lived to 90 years of age and continued to practice medicine until the time of his death. In closing, Kight said that history is not an exact science, but a science; therefore, it must be true, and someday this great man will be recognized in a manner he deserves.

Sites (South. M. J. 60:1250, 1967) spoke on "The Role of the Responsible Obstetrician" as his chairman's address before the Section of Obstetrics and Gynecology of the Southern Medical Association. He said the role has changed with the development of the science of medicine. There is still need for the art of medicine, combined with the increasing scientific knowledge. The obstetrician must apply himself not only to basic mechanics, but also to share responsibility with the patient, his colleagues and the community by aiding in the delivery of a healthy, alert, vigorous future citizen to a continuing alert, vigorous, appreciative mother.

Charles (Proc. Royal Soc. Med. 60:565, 1967) delivered the presi-

dential address before the section of Obstetrics and Gynaecology of the Royal Society of Medicine. His subject was "Some Hazards of Pelvic Surgery." He analyzed the injuries to the bladder, ureter, blood vessels and bowel adjacent to the reproductive apparatus, which occurred in about 10,000 operations performed at St. George's and Samaritan Hospitals. The conditions which render direct injury to adjacent structures most likely are those in which surgical access is limited or normal anatomic relations are disturbed; large myomas, particularly those arising in the lower segment or cervix or growing between the layers of the broad ligament, often make dissection from the bladder and ureter difficult. Ovarian or broad ligament cysts, inflammatory adenexal masses, endometriosis and malignant disease may all give trouble. The injury was recognized at the time in only 8 of 25 cases, but 5 others may fairly be subtracted because there was late sloughing after Wertheim's operation, but this still leaves 12 missed at operation.

Wilson (Proc. Roy. Soc. Med. 60:407, 1967) in the presidential address before the Section of Laryngology of the Royal Society of Medicine discussed "The Otolaryngological Hazards of the Perinatal Period." He emphasized that the perinatal period is perhaps the most dangerous time the average human being will live through. Properly speaking, it comprises the last 12 weeks of intrauterine life, the period of labor and the first week after birth. He discussed conditions interfering with the establishment of normal respiration, infection in general and especially infections of the upper respiratory passages and middle ear cleft, deafness, natal trauma, paralysis of the vocal cords and cranial birth injuries.

Howard C. Taylor (Obst. & Gynec. 31:566, 1968) delivered The Irving Memorial Lecture and selected as his title "The Making of a Woman's Hospital." He said that he thought to use the title, "A Tale of Two Hospitals" paraphrasing Charles Dickens, one in Boston and one in New York. Obstetrics seems to have preceded gynecology as an object of both medical and philanthropic attention, so that one notes without surprise that the Boston Lying-In was opened in 1832 and the Free Hospital for Women not until 1875. The Sloane Maternity Hospital, originally only for obstetrics, admitted its first patient in 1888. The entire development of obstetrics and gynecology has occurred during the life of the Boston Lying-In and, indeed, much of it during the existence of the Free Hospital for Women and the Sloane Hospital in New York. Taylor considers several constellations of secondary factors leading to change and their relation to the future of obstetrics and gynecology. He discusses them under three headings: (1) The Consolidation and Expansion of the Specialty, (2) The Growing Tyranny of Organization and (3) The Acceptance of Collective Responsibility. First, the various activities which define the present day specialty of obstetrics and gynecology are well exemplified by the combined programs of the two major units whose alliance make the Boston Hospital for Women. The Sloane Hospital in New York was originally the Sloane Maternity; the change to a combined service with a new name, The Sloane Hospital for Women, was accomplished in 1910. There are dangers inherent in the com-

bination of obstetrics and gynecology, dangers that the smaller partner which Taylor believes to be gynecology, certainly if defined by its surgical aspects, may be neglected. To maintain gynecologic surgery at its traditional levels, to withstand the criticisms of our colleagues in general surgery, to develop the area further, there must be a degree of subspecialization in a woman's hospital. A modern woman's hospital must be responsible for the specialty's rapid entrance into related areas of work, made accessible by new knowledge or by current needs of society. It must be on the alert that other equally ambitious departments do not encroach on the specialty's rightful domain. Endocrinology is only a few years old. It is essential in a woman's hospital but may require a recognized subdivision and a measure of autonomy for its staff. The social problems related to obstetrics and gynecology have been forced on our attention. Out-of-wedlock pregnancy, abortion, and family planning are the commonplaces of lay conversation. The obstetrician-gynecologist is selected as one who must help to solve these problems. Notable contributions to the basic knowledge of reproduction have been made by clinical departments. The woman's hospital as a site for advancement of obstetrics and gynecology has a major responsibility in the sponsorship of research, both that which is somewhat vaguely called "basic" and that which is more directly related to clinical problems. Secondly, freedom and organization, despite efforts to reconcile them, are far from complete. The full-time system, especially with regard to the authority held by the chairman or director of the service, is perhaps the most immediate manifestation of the passing of the old days of the autonomous individual physician. What is important is that the special contributions made by full-time and part-time staffs be mutually recognized and respected. With the rise of the hospital director, the members of the medical staff, notably the professors, have found their own prerogatives sharply circumscribed. Taylor believes that the government has acted cautiously with a real effort to preserve what it can of the medical traditions of our so-called "free society." What is important is that, within the hospital, medicine must be the objective, the end, and economics only a technic, the means to that end. Only if the governing bodies step out of their role and make decisions on medical and scientific policy can the system be called a tyranny. Thirdly, scientific advance has also resulted in a complex organization easily dominated by persons outside of our profession. The question is, How can we retain professional leadership and at least a sense of self direction? The answer, easy to make, if difficult to achieve, is that we must hold the initiative, be ahead of the demands of society. We must fully accept a collective responsibility for scientific progress and new forms of service in our field of medicine. The woman's hospital of the university medical school is clearly cast in the role of leadership in the advance of obstetrics and gynecology. In its laboratories, basic principles must be sought, and, in its operating rooms and wards, technical applications must be made. New patterns of service must be extended to the community.

E. W. Page (Obst. & Gynec. 30:318, 1967) presented the second

Samuel A. Cosgrove Memorial Lecture and spoke on "Some Evolutionary Concepts of Human Reproductions." In this very erudite paper, Page pointed out several things. Human infants are born one year prematurely and must have a high degree of maternal care in order to survive. It is the human fetoplacental unit, if left undisturbed by the obstetrician, that determines the onset of labor. On rare occasions, a defective fetus, such as an anencephalic monster, is unable to do so and a marked prolongation of pregnancy results, just as it does in cows carrying an anencephalic calf. Because the human fetus also controls the volume of amniotic fluid around it by drinking and urinating and because anencephalic fetuses are non-drinkers, it is more common for hydramnios to occur and cause a premature interruption of pregnancy. All of us have been raised on the dictum that the umbilical cord, the placenta and its membranes are nerve-free structures, but one of Page's associates, Jacobson, using a special methylene blue technic for the staining of nerve structures, has found in human, monkey, sheep and rat an extensive network of autonomic nerves in the placenta, umbilical cord and chorion. In man, evolution over the past 2 or 3 million years has developed an organ which may be second only to the brain in its complexity. Page is convinced that the human placenta is intimately concerned with the etiology of pre-eclampsia-eclampsia. In response to placental malnutrition, as with a reduction of maternal blood flow to the uterus, it would not be surprising to find that this selfish trophoblast, guardian of the fetus, could elaborate some compound which would directly or indirectly result in an increased head of perfusion that is maternal hypertension. In 1933, Grosser implied that it would be the placenta which would lead to our ultimate extinction. In 1967, the combination of nuclear bombs, war in Asia, misuse of psychoactive drugs, inept politics, insanity and other human failures lead Page to wager on the human brain. If in the political, economic and moral sense we could achieve "one world," then perhaps we could concentrate more on the paramount problem of producing physically and mentally healthy children in an appropriate quantity.

J. R. Willson (Obst. & Gynec. 30:294, 1967) delivered the Seventh Annual Isadore Forman Memorial Lecture and spoke on "Abortion - A Medical Responsibility?" He pointed out that most abortions are performed in married women with children. Abortion is used by these women as a method of controlling family size. The death of any one may leave several young children motherless. As sexual mores change and until contraceptive methods are more regularly used, we can anticipate increasing numbers of unwanted pregnancies and induced abortions, not only in indigent women but also in those of the upper social classes. Therapeutic abortion is performed at least five times more often in women in the upper socioeconomic levels than in indigent patients. The reduction in the incidence of therapeutic abortion reflects the dramatic advances in medical knowledge during recent years. The strong negative attitude of physicians against induced abortion does not necessarily represent the general feeling in our society, and it certainly does not reflect the

reaction of a woman with an unacceptable pregnancy. A desperate woman is not concerned with the legal aspects, and she usually does not permit the threat of serious illness or even death to deter her from terminating a disastrous pregnancy. If she cannot obtain a legal abortion, she will obtain one elsewhere. One most important indication for abortion is rubella. As many as 60% of the babies whose mothers acquire rubella during the early weeks of pregnancy will be affected. The risk decreases to about 15% in the eighth and tenth weeks, and there is little danger after the 1st trimester. In addition to anomalies, the abortion rate, the stillbirth and the death rates of infants during the first year increase significantly. This is due to the fact that rubella virus may continue to grow in fetal tissues, producing death in utero and the "extended rubella syndrome" in infants who survive. Abortion should also be considered if serious congenital anomalies are likely to develop repeatedly. Psychiatric consultation should be made available to a woman who seeks abortion. We cannot recommend abortion as a substitute for contraception, but contraceptive methods must be made available to sexually active women of all ages. Each victim of rape or incest deserves abortion, and each needs psychotherapy and rehabilitation. Therapeutic abortion will not cure an emotional disease, but neither will it make it worse, because the usual emotional disorder is not dependent on pregnancy for its genesis. Abortion is a medical problem, because no one else is prepared to manage the physical and psychologic conditions which either make it necessary or result from it. Willson makes the following suggestions: Physicians must understand that a woman who seeks abortion is doing so because pregnancy places her in an untenable social, economic or psychologic position. If the physician is to educate his patient and his community he must first be educated. The physician must learn that from a patient's point of view there is no such thing as a "criminal" abortion. He must encourage the expansion of public and private facilities to provide contraceptive advice for any sexually active female. The physician must become a leader in the campaign to modernize our outmoded abortion laws. Logical indications for therapeutic abortion should permit us to terminate any pregnancy which threatens life or health (emotional as well as physical), one in which the birth of a baby might present overwhelming problems to a family group, one which is likely to be productive of an abnormal infant and one in which the infant was conceived as a result of forcible rape or incest.

Brunschwig (Am. J. Obst. & Gynec. 100:122, 1968) chose for the fourth Leo M. Bobrow Lecture the subject "Whither Gynecology?" He said that a movement developed in the United States to combine obstetric and gynecologic surgery into one service and that this achievement became the source of great pride because it was felt that it represented an accomplishment. However, there is an argument against this arrangement as it now functions because most Departments have come predominantly under the influence of those interested mainly in obstetrics and/or devote their time to administration

with comparatively less attention being paid to the potentialities of gynecologic surgery. In the broad field of obstetrics-gynecology, newer developments have attracted attention, developments which are of widespread application and of important sociologic significance. It may be said that there is a renaissance in obstetrics. As to operative gynecology it appears that this has been related to a minor status in the over-all image of the large obstetric-gynecologic field. Several factors have contributed to the regression of the reputation of gynecologic surgery as a major field. Among these are (1) the obsolescence of the conception that displaced uteri were the cause of many female complaints; (2) improved obstetrics has sharply reduced the incidence of major bladder and rectal injury; (3) the advent of radiation therapy as the full treatment of cancer of the cervix and its combination with conservative surgery for corpus and ovarian cancer relieved the obstetrician-gynecologist of the feeling of major responsibility for treating these problems surgically; (4) the widespread conception that once radiation has failed to control gynecologic cancer there certainly could be no thought of surgical attack; and (5) the marked reduction in the incidence of major pelvic inflammatory disease leading to abscess formation. There is still another important factor. Beginning in the 1920s and lasting until today, prominent teaching posts in academic medical centers have been given to individuals whose interest and estimated potentials were principally in the fields of research or administration and not those with outstanding qualities as bedside teachers of students and residents and performers in the delivery room and the operating room. Specialists in obstetrics-gynecology surround themselves with auras of limited surgical interests, limited strictly to surgery of the uterus, vagina, ovaries, vulva and limited aspects of surgery of the female pelvic floor. Problems extending either slightly beyond these structures to adjacent organ systems actually measured in centimeters or even millimeters are referred to specialists in other fields. It is the present consensus that specialists in surgical fields should be competent not only in their own area but also in certain general surgical principles common to all surgery and also competent in adjacent areas as well so that, encountering situations involving adjacent areas, they are fully capable of managing the whole situation. Brunschwig believes that experience in the past quarter of a century justifies the recognition of a broad field for gynecologic surgery and as a major field of specialized practice within the large area now referred to as obstetrics-gynecology. Obviously, programs for the preparation of such surgeons would be feasible in large centers where sufficient clinical material is concentrated. The most important factor in initiating a program for renovation of gynecologic surgery is the recruitment of senior level men willing and able to rise to the challenges and give leadership for such a development. Perhaps one way to start would be the organization of a female abdominopelvic service cooperatively managed by gynecologists, general surgeons and urologists. The most satisfactory scheme perhaps would be surgical training leading to regular certification by

the American Board of Surgery followed by 2 years specialized training in the Departments of Obstetrics and Gynecology leading to certification also by the latter in Gynecologic Surgery.

Witschi (Fertil. & Steril. 19:1, 1968) delivered the Ayerst Lecture before the American Fertility Society, and his subject was "Natural Control of Fertility." He said that the study of the natural ways of fertility restriction by which, in animals and in man, reproduction rates became established that have safeguarded the maintenance of the species, reveals an imposing system of many cooperating factors and mechanisms. Most of them, like the controlled degeneration of oocytes in the human ovary and the hypothalamic clockwork-regulating breeding cycles, are incompletely understood; but even now, the analysis furnishes means and suggestions for improved methods in planned fertility control. The danger of spreading infertility for the future of man is clearly recognized. Possible measures for the prevention of fertile and improved genetic stock that may have to be adopted by future generations deserve full attention now. In the meantime, research in the biology of reproduction will continue to be of most vital importance for the evolution and welfare of our species.

van Wagenen (Fertil. & Steril. 19:15, 1968) presented the Samuel L. Siegler Lecture before the American Fertility Society and spoke on "Induction of Ovulation In Macaca Mulatta." She presented the story of induction of ovulation as seen from her laboratory, a basic science laboratory most fortunately situated within a department of obstetrics and gynecology. The first experiment focused on the effort to induce ovulation began in May, 1950. Sheep pituitary gave only occasional ovulation. However, when species specificity came to her attention, the monkey pituitary substance gave consistent ovulation, and the first success was published in 1957. Then followed quickly the use of a human pituitary preparation and two human postmenopausal urine preparations, all inducing multiple ovulation. The last experiments using Pergonal-23 were in November, 1961. In 11 years, 115 monkeys have been used. The last Pergonal experiment was made just 25 years after the first effort to induce ovulation with pregnant mares serum gonadotropin.

Short (Fertil. & Steril. 19:30, 1968) delivered the Upjohn Lecture in Veterinary Science before the American Fertility Society. His subject was "The Reproductive Physiology of Exotic Animals." He chose the elephant, the deer and the zebra in order to try to bring the truth to the question "What can we know of man, if only man we know?" Short said that the male elephant is one of those few species in which the testes occupy an intra-abdominal position throughout life. The spermatozoa are of interest. No matter how rapidly after death one recovers them, and from whatever part of the wolffian duct, they are completely immotile. Motility can be induced by diluting them with accessory secretion or even with urine. The cow elephant is even more remarkable than the bull, because examination of the corpora lutea at various stages of the estrus cycle and of pregnancy has failed to reveal the presence of even a trace of progesterone. Even the elephant fetus is unique. In the later stages of gestation, a fusion of the parietal and visceral pleura occurs, so that in the neonate and



adult the pleural cavity is completely obliterated. This may be an adaptation to the animal's peculiar olfactory drinking habits. The diminutive roe deer occupies a remarkable place in the history of reproductive physiology. The uterus is in some way capable of arresting the growth of the developing blastocyst and holding it in a stage of suspended animation for 5 months. Castration of a stag or buck is followed within 1 or 2 weeks by casting of the antlers. The antlers are cast when the testes decline in activity at the end of the breeding season. The actual mechanism of casting is one of the most remarkable examples of an effect of androgens on bone growth. As soon as the secretion of testosterone declines, a ring of osteoclastic activity develops around the base of the antler pedicle and eats into the bone as if it has been cut with a cheese wire. As regards zebras, Short says that most of the surviving Equidae have achieved a complete reproductive isolation from one another; horse  $\times$  donkey, horse  $\times$  zebra, and donkey  $\times$  zebra hybrids are viable but sterile. This sterility is apparently due to the chromosomal incompatibility of the two parent species being so great that the first meiotic reduction division of the germ cells can never proceed to completion. Short concludes that biologic investigation depends on the exploitation of biologic variations; the more we know of animals the more we will understand of man.

Sir John Peel (Australian & New Zealand J. Obst. & Gynaec. 8:1, 1968) delivered the 14th Arthur Wilson Oration in Melbourne. His subject was "The Hippocratic Oath." Peel said that the name of Hippocrates has come down through 2,500 years with a reverence and worship from successive generations that has almost deified him; but the Hippocratic School and tradition is the thing that really matters. This School which so rightly has the credit for founding modern medicine laid three essential foundation stones. First, the logic of medicine based on observation and reasoning. Second, the humanitarian concept, "Where there is love of Man, there is love of Art." Third, the ethos of medical practice. Peel is concerned essentially with the last of these three, although it interdigitates with the second. This ethos is based not on any particular religion and certainly not the Christian religion, and yet it has remained through all these centuries virtually unassailable. Essentially there are five fundamental principles contained both in the original Oath and in the more modern version, as expressed in the Declaration of Geneva in 1949 by the General Assembly of WHO: (1) the principle of the free intercommunication of knowledge and experience throughout the whole professional world; (2) the principle that professional action should always be directed for the benefit of the patient; (3) the principle of professional competence; (4) the principle of professional behavior toward the patients and their families; and (5) the principle of responsibility and penalty for unprofessional conduct and violation of any or all of the principles embodied in the Oath. There are forces at work in almost every country of the world which make it less and less easy for the doctor to regard his patient in isolation. What may be apparently beneficial for the individual patient may be in conflict with the benefit of the community. The



intervention of the state between the patient and the doctor is not new. Today, all countries are spending vast sums of money in the field of research and clinical practice directed toward prolongation of life by such extreme measures as organ transplantation, renal dialysis and massive surgical operations. Are we to have a state license for human reproduction? Currently the human race is struggling with this dilemma which involves individuals and society as well as doctors. Contraception, abortion and sterilization are all under the closest scrutiny. Human reproduction can be controlled by means of contraception and/or sterilization or by abortion. Opinions on the first two are less divergent than on the problem of abortion. Controversy within the medical profession is certainly less in evidence if we exclude those who on purely religious grounds oppose all forms of artificial control of reproduction. There are a few medical men who would raise objections on the ground of medical ethics or medical practice to contraception or sterilization in cases where further pregnancies are contraindicated or undesired. Abortion, however, is different and for different reasons. The traditional ethos of the doctor is the preservation of life. Abortion is destruction of the life of a potential human being, the fetus, but the doctor who is concerned with the life and health of the mother has in most cases been content to accept that her life and health must take precedence over the life of the fetus. With few exceptions, therefore, doctors seldom refrain from carrying out abortion when the health of the mother demands it. But what is the position when two further factors come into the picture, the socioeconomic consideration of the State on the one hand and the individual on the other. Governments have a responsibility to improve the standards of living in the countries they govern. A physician may be called on to perform a surgical operation for which there is no medical indication. He is called on to do this because he is the person who, by reason of his acquired skills and knowledge, is the only person who can safely carry out this procedure. How far should he go in doing something to which his medical conscience objects? Legalized abortion as a deliberate political policy designed to control population and to improve the socioeconomic status has been introduced into some countries, and the doctors in those countries have acquiesced and forsaken their traditional ethos. If society gives sanction to the destruction of life for one set of circumstances for what it claims to be the good of society, why should it not sanction the infanticide of the abnormal neonate, the mental defective, the delinquent, the incurable, the senile? Shall we have state boards to decide who shall live and who shall die? Is it for the individual or the State to say when an artificial life should stop, or must the decision be left entirely with the doctor? Peel hopes that the responsibility in such cases will continue to remain solely in the doctors' hands. There are three additional problems: (1) Human experimentation—Unless experimentation remains under the control only of those most experienced and knowledgeable, the image of scientific medicine could become seriously tarnished. (2) There is the growing problem of an ever-increasing screening of diseases. As we try more and more to achieve perfect