The American College of Theriogenologists (ACT) has been an activity since its recognition at the AUA's 10th Annual Meeting in Detroit, Michigan in July of 1971. Already, time is limited for firsthand recording of the ACT's difficulties and struggles from its conception through parturition and for review of the objectives of the ACT's organizers. Already, sufficient time has passed to permit a preliminary appraisal as to whether the ACT is worthy of survival through continually rejustifying its existence.

In the USA, the roots from which theriogenology has evolved may be found in the classic texts of Prof. W. L. Williams of Cornell University. In 1909, Williams published Veterinary Obstetrics, Including the Diseases of Breeding Animals and the Newborn. During the subsequent three decades, Williams published several editions of beta Veterinary Obstetrics and a companion volume, Diseases of the Genital Organs of Domestic Animals.

During the 1940's and 1950's, following decline of the domestic population and reflecting increasing bovine interests, a few veterinary researchers were occupied with infectious diseases affecting reproduction: predominantly, brucellosis, with trichomoniasis and vibriosis as minor considerations. A very few outstanding veterinary clinicians - university faculty or practitioners - were concerned with problems of infertility in the bovine and equine. Research projects (and most available funds) for advancing the revolutionary techniques for artificial insemination of dairy cattle, and for study of contingent problems, were in laboratories of a dominant group of

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Presented at the Annual Fall Conference of The Society for Theriogenology, September 26-28, 1984, Denver, Colorado. This is the first lecture in a series of annual lectures to be given by residents of the David E. Bartlett Lecture Award. This award was established by The American College of Theriogenologists and the Society for Theriogenology to recognize distinguished theriogenologists.
well-trained, competent, animal physiologists who were both highly productive and effective.

until the founding of the Rocky Mountain Society for the Study of Breeding Soundness in Bulls, veterinary interests in reproduction must be characterized by lack of organization. In Colorado, in 1954, in consequence of their common, local challenges and experiences, a small group of veterinarians founded that pioneering organization. Their limited objectives were to share and disseminate the essentials for evaluation of beef bulls for fertility and to standardize procedures employed. In retrospect, it is now evident that this little organization provided the adhesive force for something that was ready to be born.

In 1946, the Rocky Mountain Society for the Study of Breeding Soundness in Bulls changed its name to the American Veterinary Society for the Study of Breeding Soundness. Membership had expanded numerically and geographically. Scope was to include the bovine female.

In the mid-1960’s, the AVMA began encouraging the formation and recognition of specialty groups to be identified as Boards or Colleges. The AVMA’s Advisory Board on Veterinary Specialties was established with responsibility to guide and monitor developing organizations.

In response, diligent efforts to gain recognition as a specialty group by committees of the American Veterinary Society for Study of Breeding Soundness extended over several years. They failed to persuade the AVMA’s Advisory Board on Veterinary Specialties of the existence of a definable fund of accumulated knowledge and expertise in ‘reproduction’ which was of sufficient magnitude to be worthy of recognition and standing alone. There was question as to the teaching capabilities available within the university systems. Also, this Board seemed not to have been satisfied that the essentials for achieving a sound new specialty organization were extant.

In the spring of 1970, upon initiative of Dr. Lloyd Faulkner, a fresh start was undertaken. A new organizing committee consisted of:

Professor Reinunds Temjans
Veterinary Clinic, School of Veterinary Medicine, University of Minnesota

Professor Stephen J. Roberts
Department of Large Animal Medicine, Obstetrics and Surgery, New York State Veterinary College, Cornell University
Deficits of constitutions of a proposed "American Veterinary Board of Animal Reproduction" and an "American Veterinary College of Animal Reproduction," that had been proposed in the American Veterinary Society for the Study of Breeding Soundness, were modified and revised to continue with perceived policies of the AVMA's Advisory Board on Veterinary Specialties.

An appearance before the Board on Veterinary Specialties by representatives of the Organizing Committee in March of 1970 was both revealing and shattering. Those of us most involved were quite unaware that the obvious to us, that "reproduction" was a distinct and rapidly growing field in veterinary medicine, was not universally so regarded or appreciated. While disarraying at the time, in retrospect, it is now evident that the differing points of view expressed within the Board should not have been so shocking.

At that time, customs for presentation of "reproduction subjects" did vary widely among the various colleges of veterinary medicine in the USA. For the equine and bovine, obstetrical manipulations, fetus, and cases were usually functionally and secondarily related to large animal surgery and the surgeons. Pathology and infectious diseases of reproduction for large animals were often parts of medicine. Reproductive problems of dogs and cats were handled with small animal medicine and surgery. Artificial insemination, physical diagnosis of the male and female genital systems, and endocrinology were organs and frequently had received spot checks.

In large animal practice in commercial breeds, herd fertility work still tended, too typically, to be shunned. Exceptions were a few, largely self-trained veterinarians specializing in elite herds of cattle or with studs and bands of blood mares.
The characteristically understaffed veterinary schools of the past allowed for very few faculty members whose teaching assignments were not primarily in surgery and/or medicine. With a few notable exceptions, on whom with reproduction was secondary. Mostly, there were departments of surgery and obstetrics, or medicine and obstetrics. Was it not natural for veterinary graduates to reflect their own individual student experiences?

It is notable that the name proposed for the new organization seemed inappropriate: The American Veterinary College (or Board) of Animal Reproduction. Literally, this meant an American college pertaining to animals of animal reproduction. At least, it was labored, redundant, and awkward.

Now, it is clearly evident that for this area of veterinary medicine, concerned with reproduction, there was a matter of identity, especially, a lack of veterinary identity.

For many years, research in reproductive physiology and in reproductive management had been dominated by non-veterinary institutions and by non-veterinarians publishing in non-veterinary publications. The physiologists were well organized in the Society for Study of Reproduction. There was an excellent, periodic symposium on Animal Reproduction sponsored by the American Society of Animal Science. At several universities, within animal husbandry or dairy science departments, there were sections for teaching of and research on animal reproduction.

Nevertheless, as needs or opportunities within the livestock industry appeared, some veterinarians had extended their activities into the multidimensional factors of reproduction. Obviously, veterinary obstetrics was no longer appropriate nor descriptive of their scopes of activity. In fact, obstetrics had become minor. Phrases such as veterinary obstetrics, genital diseases, and animal reproduction, veterinary reproduction, breeding soundness represented combinations that were too limited or fell short.

This writer recognized the problem to be an extension of the same dilemma of two decades earlier when trying to develop an appropriate name for a new teaching section within the clinics at the then new School of Veterinary Medicine at the University of Minnesota. At that time, at a chance meeting and discussion with a scholar of classical languages, whose name I've forgotten, the term theriogenology, note oga had surfaced.
Granted, veterinary etymology and veterinary terminology were established words in Europe, but herein was a problem. In their origins from the Greek, 

"veterinary" does not mean "female." It means "woman." Androgynous does not mean "male." It means "man."

Out of frustration was born opportunity. A new organization needed a new name. A growing area of veterinary medicine was in critical need of an identity and a name.

Professor Herbert Howe, Department of Classics, University of Wisconsin, was consulted. He was a long-time teacher of courses for students of pre-medical sciences in the Greek and Latin origins of medical terminology. Professor Howe came up with close to the same proposal of twenty years earlier: *theriogenology.* Note: gen-

Professor Howe pointed out words in the then current dictionary: Darland's defined *theriogenesis* as meaning "veterinary medicine": *theriophobia* as meaning "treatment of the diseases of lower animals": *theriometry* as meaning "dissection or anatomy of animals." These words derive from the Greek term *theria,* meaning "beast."

Also, one would find in Webster's International Dictionary *theriogenesis* defined as the "science of veterinary medicine": *therioanthropic* as pertaining to the "center," which both distinguished and defined beast and man: *therioglyphic* meaning "having an animal form."

Zoological taxonomists used the term *dichotia* to delineate the subclass of placental mammals.

The New Random House Dictionary defined *genesis* as "creation" or "beginning," "generation," "birth," "genesis" as "genesis" or "reproduction": *generate* as "to bring into existence" or cause to be. 

Darland's defined *genetics* as "the sum of what is known concerning reproduction."

Howe's word, *theriogenetics,* was etymologically correct. It gathered mammals — both male and female — and reproduction: both physiology and pathology. Usage could relay this properly structured word to veterinarians and to veterinary medicine. Has anyone ever heard of a gynecologist who was not a physician?

The possibility of an American College of Theriogenologists was first presented to the previously mentioned Organizing Committee in a letter dated 14 May 1970. Initial committee responses were prompt and substantially affirmative.
it was fortuitous that a timely and highly significant event occurred 10 August through 3 September 1970 at Brainerd, Minnesota. Initiated and organized by Dr. Ray Zemanik of the University of Minnesota, the Conference of North American Veterinary Educators in Animal Reproduction and Infertility was attended by 41 participants, representing 21 of 24 veterinary schools of USA and Canada.

This gathering marked the first time that most of the veterinary educators in the field of reproduction had ever been able to meet face to face in the same room. In fact, previously, many did not even know the names of their counterparts at comparable institutions.

At the close of this productive exchange, focus on "all facets of reproduction" in veterinary medicine, items 1. and 2. in the summary of the Conference were:

1. Theriogenology or animal reproduction is a specialty that is an integral part of the veterinary curriculum.

2. The word theriogenology should replace the phrase animal reproduction and obstetrics in the veterinary vocabulary.

Concomitant with the educators’ conference, the Organizing Committee decided to become the Organizing Committee for The American College of Theriogenology (ACT). Directly, a list was drawn up of invitees who were considered eligible to apply for certification and election as Charter Members. Curriculum vitae, including publications, were submitted to the Organizing Committee of ACT and to the AVMA’s Advisory Board on Veterinary Specialties.

In the 15 December 1970 issue of JAVMA the following announcement appeared:

New Specialty Group Formed
on Animal Reproduction

A new veterinary medical specialty group, the American College of Theriogenology, has been formed, with 29 charter members. Committed to advancing the professional education of veterinary practitioners, ACT seeks to fill a long-recognized need for unity, identity, and advance that branch of veterinary medicine concerned with the reproduction process in animals. The group's aim is to define the specialty as a specialty group of the AVMA.
On Friday 12 March 1971, the Organizing Committee of ACT, represented by Drs. Oberst, Faulkner, and Bartlett, again appeared before the AVMA's Advisory Board on Veterinary Specialties with more than a dozen of its members present. That year, most of the discussion centered around proposals for minor revisions of a constitution. No objections were raised in respect to any of the major principles.

Especially, one clause in ACT's constitution should be noted and recalled. It is unique among the AVMA's Boards and Colleges. Article IV Section 1 states: "The College shall strive a dedicated commitment toward the practitioner of veterinary medicine and shall develop special procedures for evaluation, recognition, and certification of competence of veterinary practitioners in therio-

A positive attitude was assumed by the Organizing Committee of ACT as it set about plans for moving forward. Late in March, the ACT Organizing Committee was advised of provisional approval by the AVMA's Advisory Board on Veterinary Specialties. In its April meeting, the Council on Education of the AVMA reviewed the recommendations of the Advisory Board and, based upon certain outlined contingencies, recommended to the AVMA's Executive Board and House of Delegates that The American College of Theriogenologists be given provisional approval.

Minutes of the organizing meeting of The American College of Theriogenologists, held in Palmer B of the Detroit Hilton, Detroit, Michigan, 19 July 1971 in conjunction with the joint Annual Meetings of the Canadian (23rd) and American (104th) Veterinary Medical Associations include the following statements:

1. Favorable action of the AVMA's 1971 Executive Board and House of Delegates granted the American College of Theriogenologists (ACT) provisional approval.

2. Seventeen of twenty-eight Charter Diplomates were in attendance.

3. Officers elected were First President - Dr. David R. Bartlett - 2 year term First Secretary - Dr. Lloyd C. Faulkner - 3 year term First Treasurer - Dr. Payne Oberst - 2 year term First Executive Board Diplomate Members - Dr. Stephen J. Roberts - 1 year term - Dr. C. A. V. Basker - 2 year term - Dr. Raimundo Varnhals - 3 year term
4. ACT’s constitutional commitment to dedicate its efforts towards advancing practitioner education and opportunities in theriogenology was reaffirmed.

Successfully born, ACT undertook the task of achieving recognition as particularly recognition of the word theriogenology and the scope of theriogenology.

With remarkable rapidity, the academics set about the renaming of variously designated teaching units and courses at their respective universities. Within a year, theriogenology appeared in announcements of courses offered and in class schedules of several universities — first at the Universities of Georgia, Purdue, and Cornell.

Fortuitously, a new edition of the principal text in the field, authored by Professor Stephen Roberts of Cornell, was in final process. It appeared under the title: General Diseases and Obstetrics (Theriogenology).

Presently, there seems to be little question that the rapidity of adoption of the word theriogenology and theriogenologists reflected their needs in the professional vocabulary of veterinary medicine.

For the first time, a succinct identity was provided. With a single word, a previously fragmented and undefinable field was unified and defined.

Not until delineation of an ‘ology’ was it possible for there to be an ‘ist’.

In retrospect, the limited amount of division and ridicule elicited upon introduction of the new terms, theriogenology and theriogenologist, was more amusing than significant. It was short lasting. Students, who were already assimilating and digesting hundreds, if not thousands, of new words each year, were unsuited. For older veterinarians, whose professional vocabularies already included many thousands of words, addition of two more words should have been of no consequence. Theriogenology was soon found to be no more difficult to say than otolaryngology or anesthesiology.

The only regrettable occurrences that marked ACT’s otherwise smooth emergence into the mainstream of veterinary medicine were the expressed disappointments — some very bitter — of a few, well qualified and prominent veterinarians not included among the necessarily limited number of Charter Diplomates.
Review of events since the birth of thoracology establishes a satisfying list of accomplishments and significant consequent developments:

1. The faith and convictions of the Organizing Committee of ACT have been justified.
   - An ongoing, financially sound organization is in place with new officers and new board members being elected annually. Pre-orientation from diplomats admitted to the college by examination. Note of the six members of the Organizing Committee have held office since 1974.
   - The ACT examinations for diplomate status offered annually are attracting well-motivated applicants. As of the class of 1983, 108 additional veterinarians have completed examinations and achieved diplomate status.
   - Of particular note is the fact that several veterinarians in practice have already received recognition as diplomates of the ACT through presentation of their special qualifications and by examination. Thus, the constitutional commitment to veterinary practitioners and the moral commitment to the society are being fulfilled.
   - A well-balanced College that will not become the exclusive territory of academics and researchers is assured.
   - The commitment to providing opportunities for furthering education in thoracology has been met. ACT has organized and presented, assisted, and/or cooperated in presenting programs in thoracology at annual meetings of AVMA, and the Western States Veterinary Conference.

2. Recognition of and definition for thoracology quickly appeared in medical dictionaries.
   - Recent editions of Dorland’s Illustrated Medical Dictionary define thoracology as: "That branch of veterinary medicine which deals with reproduction, including physiology and pathology of male and female reproductive systems and the clinical practice of veterinary obstetrics, gynecology and sexology." Also, thoracologic, thoracological and thoracologist are appropriately defined.
Recent editions of Sueda's Illustrated Medical Dictionary define theriogenology as: "The study of reproduction in animals, especially domestic animals. This veterinary specialty includes the study of obstetrics and genital diseases in male and female animals, as well as the physiology of animal reproduction." Theriogenologic and theriogenological are appropriately defined.

3. In 1974, the American Veterinary Society for the Study of Breeding Soundness changed its name to the Society for Theriogenology. During a transitional phase of four years, both names were used. This change has been accomplished in an orderly and effective manner. The scope of the Society for Theriogenology was broadened to include all aspects served by veterinary medicine.

4. The scattered facets of veterinary medicine within the definition and scope of theriogenology have been gathered together in several highly successful publications. Expansion and continued updating is assured.

- In 1974, a new periodical appeared. Theriogenology: An International Journal of Animal Reproduction, was edited by the late Dr. John Siegel. By 1984, a worldwide circulation to 31 countries had been achieved with approximately 800 subscribers. Since 1980, the Journal has been edited by Diplomate Dr. Victor W. Shime. Approximately 1,200 additional contributions to the science of theriogenology have already been published in this new journal.

- In 1980, a two-volume, 1,287-page volume appeared: Current Therapy in Theriogenology, edited by Diplomate Dr. David A. Morrow of Michigan State University. There were 138 worldwide contributors, including many Diplomates of ACT. Already, a second edition is in progress.

- In 1984, a third edition of Diplomate Dr. Stephen J. Roberts' book will be available under the title: Genital Diseases and Obstetrics (Theriogenology).

5. Each year the papers presented at the annual meetings of the Society are compiled in the Proceedings of the Society for Theriogenology.
As the Journal of the Society for Theriogenology, a series of excellent monographs directed to practitioners has been prepared on specific clinical subjects such as: "Manual for Breeding Soundness Examination of Bulls", "Reproductive Examination of the Bovine", "Theriogenology and the Equine", and "Canine Theriogenology".

6. Theriogenology has gained international recognition and acceptance.

- Resident in Australia, there are three ACT diplomats, in Canada, eight, and one each in New Zealand, Nigeria, Sweden, Trinidad, and Venezuela.

- Honorary Diplomat status in ACT is held by nationals of Belgium, Denmark, Netherlands, and Sweden.

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Having been around long enough to have observed that the past really is prologue to the future, I cannot resist offer of some comment upon the present with implication for the hereafter:

1. It couldn't have been better expressed than by Dr. Bay Zsajkans at the Educators' Conference in 1970. He said, "Theriogenology just can't make it as a liberal art."

Particularly, it should be hoped that the future leaders in theriogenology, especially those in academic and research positions, will digest and assimilate that laconic and veracious statement.

More than any other area of clinical veterinary medicine, theriogenology must be able to justify its existence and furthering in terms of direct new dollars to be generated for animal owners. Obviously, objectives of both food animal and companion animal owners, when looking to theriogenology for answers, is the obtaining of offspring - or more offspring - to sell or to keep and, in the case of dairy cattle, - more lactations.

We know that theriogenology offers practical, applicable, and valuable procedures that are still grossly underemployed. Why shouldn't the teaching sections at the veterinary colleges provide needed leadership by devoting at least 10% of their budgets and efforts toward developing and promoting old and new practices that demonstrate to animal owners the values, in economic terms, of theriogenology?
In an issue last year in the Society newsletter, President Ed Lindner made clear his opinion that therio-
genetics was the "door opener" in a new health practice.

I believe that both the Society and the College can and should contribute, substantially, to planned efforts toward ethical marketing of the knowledge and skills that are theriogenology.

It not the increasing of market size the best and most intelligent way to adjust to the sharply increasing number of veterinary graduates?

2. I disqualify myself from speaking about the direc-
tions of companion animal theriogenology. However, I would like to offer some comments upon some present and future aspects of bovine theriogenology.

Just as it has always been questionable whether a golden destiny would be found at the researchers' pursuit of N.I.H. grants, an over-investment by our academic and clinical colleagues transplanting of embryos, if and when preconceived for birth = sex-tailed, seems somewhat dubious.

Solid genetic values, measurable in terms of real meat and milk, will, and should be, the ultimate determinants of continued volume use and usefulness of this fascinating and important technology. Future developments in cloning by nuclear transfer and gene transfer could, however, using embryo transplants, open the possibilities of spec-
tacular economic advances in animal breeding.

3. Since 1970, we have seen, in veterinary medicine, vigorous and gratifying growth of many specialty groups that signify both the broadening and the deepening of pro-
fessional competence. Strong and very independent organi-
zations have been formed along two lines: (1) by species of animals served and (2) by physiological systems.

Today, it is usual for veterinarians to hold membership in both the species group and the systems group reflecting their special interests.

It seems very important that members of the therio-
genetics organizations be actively involved in their respective species, practitioners organizations: bovine, equine, porcine, ovine and caprine, canine, felicine, zoo, wildlife, laboratory animals, as the case may be.

However, competition between the systems and the species organizations is unacceptable. Divergence in pro-
grams and activities must be avoided. Parallels will be unconstructive. A comfortable degree of convergence, interchange, and duplication of programs and activities
would seem to be sound objectives. Initiation and main-
tenance of liaison by the Society and the College are
essentials.

4. Provincialism in theriogenology must be avoided.
Thankfully, theriogenology has been and is being greatly
enriched by graduates of veterinary schools from other
than those in North America. A very few of our graduates
have been broadened and deepened by opportunities for
study overseas. Far more of our young veterinarians
should be encouraged to experience the stimulation of the
great veterinary institutions in other parts of the world.

5. Four and five decades ago, a few clinical pioneers
were delivering programs whereby herd reproductive health
and efficiency were monitored by scheduled, routine geni-
tal examinations. Established categories were periodic-
cally inventoried and appropriate actions taken. Managers
were convinced of the value of these procedures and some
managers were convinced they couldn't operate their herds
without the information provided.

Then recognized limitations were the laborious systems
for obtaining, recording, organizing, and retrieving of
data. Tally cards, dropped behind file headings were the
usual. Use of hand punched cards, sorted with a knitting
needle, was the elegant way. Clerical time required to
cope with the mass of detail was considerable and was a
critical limit to expansion.

Gradually, electronic data processing has evolved to the
level of today's availability at the farm/herd level. The
impossible is now possible.

Failure of thetogenologists to exploit the utmost
computer capability in herd management would be a
disappointing example of a now fulfillable promise left
unfulfilled.

6. My almost last comment may be too minor—but,
I'd like to get them off my chest.

There are several words which I believe should be
banished from our professional vocabularies.

The first is conception; especially, when used in con-
ception rate. Definitely, it is wrong to use conception
rate as synonymous with non-return rate.

Implied rate of fertilization and/or pregnancy, con-
ception rate properst to quantity events in populations
that are inherently unknown in the different individ-
uals. Equally uncertain are the number of ova actually
fertilized and the frequencies of early embryonic mortal-
ities.
All that can not be accurately determined is a case of diagnosable ambiguity; so, why not use that term and purge confusion exist.

Here, are the words breed, bred, breeding as verbs and bred and breeding as nouns.

can you imagine the confusion of a translator of these words, or the consternation of veterinarians for whom Polish is not their first language, when confronted by words for which rules of grammar, context, and usage determine the specific meanings?

For example, one could write: When time to breed, the mare of best breeding were to be bred at the breeding shed by a purebred stallion of a different breed and then placed with the thoroughbred mare that had been bred and were either bred or not bred.

I insist that though confusion I have made my point clear.

Finally, we now have a useful and widely accepted verb in the jargonology with its root meaning "animal/mammal" and with veterinary connotations.

Also, theplastics and theplotherapy, are old and correct synonyms for "veterinary treatments" and for "veterinary medicine". Other very useful new words using the theplon root could be developed.

You had that jargonology is commonly abbreviated as J. Why不好 tell that it be abbreviated as J? Why preempt use of the root theplon from new uses for other and better purposes?

3. Finally, what an enviable state prevails for today's veterinarians with interest in reproduction.

The technical capabilities to increase reproduction and productive efficiencies exist.

Two strong, complementary organizations, dedicated to advancement of theplonology and to advancing education in theplonology, the Society and the College, are functioning.

Your future can be and will be substantially influenced by how well these two vehicles are chauffered.