Correct Terminology in Science: The Role of Editors

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In science, we are searching for truth. We use the scientific method in identifying a problem, formulating a testable hypothesis, designing experiments and obtaining observations, interpreting the results, and formulating conclusions. In all this, we use scientific terms. Scientific terms permit clear, concise, and unequivocal expression of our best understanding of truth provided that they are used properly.

Some rather general terms are not always used properly in scientific papers. One example is *trimester*, describing a period of 3 months, just as a semester is a period of 6 months (for definitions, see any standard dictionary). However, when one enters *trimester* as a key word in specific combinations in the Web of Science (for example, *trimester* and *sow*, *trimester* and *porcine*, *trimester* and *ewe*), one finds a wealth of articles in which the authors mean something completely different, namely, the word *third*, as in the first or second or third portion of animal pregnancy.

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The problem began years ago. In the early 1970s, farm animals (mostly swine and sheep) became model animals in human perinatology. In many peer-reviewed articles, the authors automatically took the word *trimester* from human pregnancy, which indeed lasts three trimesters (9 months, as also in bovines) and began to use it when writing about their animal models. They commonly produced such titles as "Male fetal pig lower urinary tract function in mid second and early third trimester of gestation"[1], "Effect of porcine reproductive and respiratory syndrome virus infection on the ovary and progesterone levels in third trimester pregnant sows"[2], and "Changes in selected brain neurotransmitters and their metabolites in the lamb after thyroidectomy during the last two trimesters of gestation or the early neonatal-period"[3]. Such articles can be found in many prestigious journals, for example, *Biology of the Neonate; Growth, Development, and Aging; Pediatric Research; Physiology & Behavior;* and more recently *Alcohol; Anesthesiology; Hormones and Behavior; Journal of Applied Physiology;* and *Urology*.

All veterinarians and animal scientists know that sows are pregnant for about 112 days (just a bit over 1 trimester) and ewes about 165 days. One would expect researchers who study these species to know such basic facts. However, even in animal-science journals—for example, *Journal of Animal Production and Theriogenology*—such titles occur occasionally. Although I pointed to this problem in a short article[4], the word keeps coming up: in November 2012, the Web of Science numbers increased to 111 records for trimester and ewe and 103 records for trimester and ovine. I am still fascinated by the fact that this misuse goes unnoticed by authors, reviewers, and editors. All of us—editors and reviewers—must be the gatekeepers not only of good science, but of exact and appropriate science communication. Correct terminology is one of the tools we must insist on. The distance to the bookshelf to check a term is not so far.

References

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