In this organization the question of publication of scientific abstracts is under constant discussion.

The International Federation for Documentation could play an important role as a central guiding and information office on abstracting services and translation centers.

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Perceptual Constancy

The very interesting findings by Leibowitz and Hartman on developmental changes in the magnitude of the moon illusion [*Science* **130**, 569 (4 Sept. 1959)] remain ambiguous in one respect. The data of Fig. 1 indicate that the illusion—that is, the disparity between the perceived sizes of the horizontal and overhead disks—diminishes with increasing age. The authors attribute this lessening of the illusion to an increase in the phenomenal size of the overhead disk; in other words, the perceived size of the overhead disk more nearly approaches its objective size—that is, constancy. One could, however, just as easily attribute the shrinkage of the illusion to a *decrease* in the apparent size of the horizontal disk, which would mean that with increasing maturity perception becomes less constant, that one perceives the moon at the horizon more nearly in terms of retinal size. It is not safe to say that the authors' interpretation is the logical one in the light of known principles of perceptual development, for, as C. E. Osgood [*Methods and Theory in Experimental Psychology* (Oxford, New York, 1953), pp. 227-280] points out, the evidence on developmental changes in constancy is at best inconclusive and at worst downright confusing.

One possible way of removing the ambiguity is to test the authors' conclusions in a size-distance constancy experiment for objects in both the overhead and horizontal positions. Such an experiment might show (i) that constancy increases with age for objects at the zenith; (ii) that constancy decreases with age for objects at the horizon; or (iii), that both (i) and (ii) occur. I would be willing to bet on (iii). Or the authors might want to try out the related hypothesis that individuals who habitually operate in three-dimensional space —construction workers, circus aerialists, aviators—are less subject to the moon illusion than the rest of us horizontal-oriented mortals.

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Church's argument is logical if one assumes that the present state of research on developmental changes in perceptual constancy is indeed inconclusive. In Osgood's discussion, the confusion results from considering size and brightness constancy together. Since it has been demonstrated that the different constancies are most probably mediated by different mechanisms [H. Leibowitz, P. Chinetti, and J. Sidowski, *Science* **123**, 688 (1956)], it seems advisable to evaluate size constancy separately. In this context, the studies cited by Osgood as well as the more recent experiments referred to in our original note indicate that size constancy does improve with age, especially for distant objects. On the basis of this evidence, we were led to suggest the hypothesis proposed in the original note rather than the alternative possibility that was suggested by Church.

Church has also suggested that individuals who habitually make discriminations with respect to objects outside of the horizontal plane may demonstrate a decreased moon-illusion effect. We have made no systematic observations on this point, but it is relevant to mention that two of the 19 adult subjects demonstrated no illusion effect whatsoever. Upon further questioning, it was revealed that one of them had worked as a forest ranger while the other is an amateur pilot. Further experimentation is certainly indicated, but the available data are in agreement with part of Church's hypothesis.

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Ethology and Psychology

The title of the Sixth International Ethological Conference, recently held at Cambridge University, again focuses attention on the problem of what to call the rapidly developing science of animal behavior. The term *ethology* has been defined by Tinbergen [in B. Schaffner, Ed., *Group Processes* (Macy Foundation, New York, 1955)] as "the biological study of behavior." Since psychology in its modern sense is often defined as "the science of human and animal behavior," it is obvious that these two terms overlap and may be almost identical.

This presents the possibility of a jurisdictional dispute as well as an unreal dichotomy of subject matter, and one wonders why a new term should be needed. The answer lies both in the history and in the professional organization of science. Psychology has concerned itself primarily with human be-