Animal Learning (& Behavior?)

DONALD A. DEWSBURY
University of Florida, Gainesville, Florida

Animal Learning & Behavior was founded as a journal that would provide broad coverage in a variety of areas of animal psychology; diversity of input was valued. Data are presented to show that the breadth of the journal has decreased over time. The journal now is devoted primarily to the areas of animal learning and memory. There has been a decrease in the number of papers from other areas of animal psychology. Fewer Associate Editors are known primarily for work in areas other than learning and memory. Several alternatives for the future of the journal are presented.

Animal Learning & Behavior was founded in 1973 as a journal that would cater to researchers working in a broad range of areas, as reflected in its title. My goals in this paper are to examine changes that have occurred over the years since its founding and to consider whether its basic character and coverage might have changed.

The purposes and character of a journal are best understood after an examination of the editors' statements. Fortunately, there have been four such statements in *AL&B*. The goal of a broad range of coverage in *AL&B* was made clear in Abram Amsel's founding editorial, from which I quote extensively:

This is not a highly specialized journal; and the fact that it is not makes it reasonable to expect, and provides an opportunity for, increased communication among, say, investigators whose work is with Pavlovian conditioning, operant conditioning, and other paradigms for the study of learning and motivation, as well as investigators of animal development and animal behavior from a number of different orientations. . . . We sense that some breaking down of intellectual and terminological barriers in these and other areas already has been accomplished, and feel that an acceleration of this process is desirable. To publish in *AL&B* should, therefore, be regarded as an opportunity to communicate with a more diverse audience than usual. (Amsel, 1973, 1-2)

This theme was continued in the remaining three Editorial Comments. D'Amato (1977) wrote that "I think that the wide spectrum of research topics published in the *Journal* is one of its main strengths" (p. 1). Bolles (1981) wrote of "the marvelous diversity of our authors" and noted that "We relish this diversity. We believe we will be nourished by it and grow strong on it" (p. 1). Church (1985) affirmed that "One of the major strengths of *AL&B* has been its breadth of coverage" (p. 1). The current Editor, V. M. LoLordo, was the first to take office with no published editorial statement.

I shall now consider some aspects of the breadth of coverage of *AL&B*. I shall be especially concerned with

the coverage in areas of animal psychology other than learning and memory.

CONTENT ANALYSIS OF PAPERS

By my count, a total of 1,212 papers were published in the first 17 volumes of *AL&B* during 1972-1989, excluding editorials, notices, announcements, errata, notes, and comments. This is a mean of 71.3 papers per year. However, there have been changes over time in the number of papers published, with a peak at 94 in 1976, followed by a decline and another peak at 98 papers published in 1980. This has been followed by a rather steady decline, with just 51 papers published in 1989, the lowest in the history of the journal.

I have examined the papers published in *AL&B* and have attempted to categorize them into papers dealing with animal learning and memory as opposed to those dealing with other topics in animal psychology. This requires many decisions of judgment; surely, no two individuals would come up with exactly the same classifications. However, the trends appear fairly clear and seem unlikely to be affected in a major way by disagreements over the classification of a modest number of papers.

In general, papers I have classified as being in an area other than learning and memory, which I shall term "non-learning," for brevity, are recognizable because the methods or problems of learning and memory are not a major aspect of the study. Classification is not always easy. For example, with the work of B. G. Galef, Jr. on social interactions and feeding in rats, I have counted a paper as concerning learning if learned information seemed to be transmitted, as in studies of learned taste aversions. However, if there were altered taste preferences simply as a result of interaction with a conspecific that had eaten a diet, I counted it as nonlearning. Similarly, studies of "defensive burying" were counted within the learning category if the emphasis was on conditioning, but as nonlearning if the focus was on situational determinants of defensive burying.

The journal always has been dominated by papers in the areas of learning and memory. I classified 164 of the 1,212 papers as nonlearning (13.5%). However, there ap-

All correspondence should be addressed to Donald A. Dewsbury, Department of Psychology, University of Florida, Gainesville, FL 32611-2065.

Figure 1. Percentage of papers appearing in *Animal Learning & Behavior* dealing with areas of research other than learning and memory as a function of volume number (1973-1989).

pears to have been a steady decline in the percentage of papers devoted to topics other than learning in the 17 volumes of *AL&B*. The changes in successive volumes are presented in Figure 1. In its inaugural year, *AL&B* published 15 nonlearning papers, or 20% of the total. The percentage peaked at 21.3% in the journal's second year. The percentage dipped below 10% for the first time in 1978 and has been below 10% in three of the last four years. The two small, recent peaks result from a collection of papers from Galef in Volume 13 and a series of papers on magnetic sensitivity in Volume 15. Not since 1982 have as many as 10 nonlearning papers appeared in *AL&B*.

EDITORIAL APPOINTMENTS

Another approach to characterizing a journal is an analysis of its editorial boards. The journal has had five Editors. By my count, 47 individuals have served as Associate Editors; as some served under more than one editor, there have been 57 appointments to the post of Associate Editor. None of the Editors has been female; seven of the Associate Editors (15%) have been female. Interestingly, none of the Editors served as an Associate Editor either before or after his term as Editor; the post as Associate Editor is not a training ground for Editors.

I have attempted to classify the Editors and Associate Editors with respect to whether or not their primary contributions have been in the area of learning and memory. All five Editors have been closely associated with the study of learning and known primarily for such work. However, Robert Bolles also is known for nonlearning research on motivation, especially in more recent years.

Eight of the 57 editorial appointments (14%) have been of individuals not primarily associated with the study of animal learning and memory. This is about the same as the percentage of papers in these fields. However, the pattern again shows a decrease over time. Editor Amsel made three of 14 appointments (21%) in the nonlearning areas (E. Hess, W. Mason, D. Thiessen) and Editor D'Amato made three of 12 appointments (25%) in these areas (C. Beer, D. Candland, G. Burghardt). However, Editor

Bolles appointed just one of seven (D. Candland). All of the 21 appointments of Editor Church were associated with the study of learning, although Susan Mineka also has done important work in nonlearning areas. Editor LoLordo's three appointments all are in the area of learning and memory.

DISCUSSION

It seems clear that the range of coverage of *AL&B* has become narrowed over the years. The quantitative analyses presented above merely confirm the impressions that I and others have had of this constriction of interests in *AL&B*. Earlier volumes included the work of R. Blanchard, G. Gallup, R. Johnston, M. Kristal, B. Latane, E. Price, D. Thor, and others. Those names, and the names of others doing similar work, are missing in recent volumes.

Several caveats are in order with respect to the interpretation of these data. The most critical gap is the absence of data on the submissions to *AL&B*. We do not know whether or not the changes in the rate of submission of nonlearning papers run parallel to the decreasing number of published papers. Even if we did, it would be difficult to assess the quality of the papers and any changes that may have occurred therein. Editorial decisions would be interpreted differently, depending on such data. With respect to the data on the appointments of Associate Editors, it is clear that the decrease in appointments occurred roughly in parallel with the decrease in the number of nonlearning papers. Correlation does not imply causation. It may be either that fewer papers have been published because there are fewer Associate Editors for nonlearning papers, and hence potential authors perceive this as a "learning journal," or that there are fewer nonlearning editors appointed because there are fewer papers submitted and published. Most likely, the two exert a positive-feedback, spiraling effect on each other, producing decreases in both the number of papers published and the number of editorial appointments. Perhaps some other factors have affected both.

If the current content of *AL&B* seems discordant with its name and founding philosophy, several alternatives are possible. The simplest is to ignore the data and accept the status quo. Another possibility would be to recognize that *AL&B* has become a journal of animal learning and memory and to rename it. Alternatively, one might wish to attempt a reinvigoration of the diverse nature of the original *AL&B* by restoring breadth to its editorial board and by actively soliciting nonlearning papers. These are decisions for the editors and others who guide the policies of *AL&B*.

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