

The Schism Between Experimental and Applied Behavior Analysis: Is It Real and Who Cares? ¹

Alan Poling, Mitchell Picker, Deborah Grossett,
Earl Hall-Johnson, and Maurice Holbrook
Western Michigan University

This paper addresses the relationship between the experimental analysis of behavior and applied behavior analysis. Citation data indicate that across time the *Journal of the Experimental Analysis of Behavior*, and other experimental sources, have been referenced increasingly infrequently in the *Journal of Applied Behavior Analysis*, *Behavior Therapy*, and *Behavior Research and Therapy*. Such sources are now rarely cited in these journals, and never have been regularly referenced in *Behavior Modification*. Although their proper interpretation is far from certain, these data partially support recent suggestions that the experimental analysis of behavior and applied behavior analysis are largely separate, insular fields. A questionnaire, mailed to the editorial staffs of the *Journal of the Experimental Analysis of Behavior* and the *Journal of Applied Behavior Analysis*, was intended to gather further information about the alleged schism between the fields. Few respondents regularly read both journals, publish in both journals, or find both journals useful in their current research efforts. The majority of editors of both journals indicated that the fields were growing apart, although there was no consensus that this is harmful for behavior analysis. Most editors of the *Journal of Applied Behavior Analysis* reported that research published in the *Journal of the Experimental Analysis of Behavior* has decreased in value to applied researchers across time; most editors of the *Journal of the Experimental Analysis of Behavior* indicated that research published there has not changed in applied value. Several respondents commented at length concerning the relationship of experimental and applied behavior analysis. These comments, many of which appear in the article, reveal a marked plurality of views.

In the past few years, several authors have discussed how applied behavior analysis has changed across time. Deitz (1978) persuasively argued that the field has become increasingly less scientific and more technological. That is, emphasis has shifted from the precise experimental analysis of functional relations between independent and dependent variables to the effecting of changes in dependent variables per se. This conclusion is upheld by data reported by Hayes, Rincover, and Solnick (1980), who analyzed articles published in the *Journal of Applied Behavior Analysis (JABA)* from 1968 through 1978. Deitz contended that the change in emphasis was premature and probably counterproductive. Pierce and Epling (1980) reached a similar conclu-

sion, based in part on an analysis of articles published in Volume 11 of *JABA*. Like Deitz, these authors noted that applied behavior analysis has become increasingly separate from the experimental analysis of behavior, seemingly to the detriment of the former field.

Branch and Malagodi (1980), too, have commented on the relation of the experimental analysis of behavior to applied analysis. They note (1980, p. 27) that

the breakthroughs in applied behavior analysis were performed by persons, e.g. Wolf, Baer, Michael, Azrin, et al., who had begun their training as laboratory scientists. Today's 'applied behavior analysts,' at least a majority, have never been in a laboratory, let alone performed experiments there. Our suggestion is that effective behavioral skills, as well as a basic appreciation for the power of a behavioral analysis, are born in the contingencies in the lab.

In a related vein, Michael (1980a) has advocated that all behavioral psychologists be well trained in basic laboratory research findings and procedures—the experimental analysis of behavior—regardless of their eventual professional activities.

Our general purpose is to consider

Reprint requests should be sent to Alan Poling, Department of Psychology, Western Michigan University, Kalamazoo, Michigan 49008.

¹We gratefully acknowledge the help of the members of the editorial staffs of *JEAB* and *JABA* who responded to our questionnaire. Carol Parker's comments on an earlier draft were much appreciated.

whether behavioral psychology is becoming divided into two specialty areas, the experimental analysis of behavior and applied behavior analysis, neither of which significantly impacts upon the other. In the first section, data are presented showing the relative frequency of experimental citations across years in four journals that often publish studies in applied behavior analysis. These data provide one of very few empirical means of assessing the degree of interaction between experimental and applied behavior analysis. In the second section, the results of a questionnaire sent to the editorial staffs of the *Journal of the Experimental Analysis of Behavior (JEAB)* and *(JABA)* are presented and discussed. The questionnaire was designed to evoke verbal responses to questions relevant to the relation of the experimental analysis of behavior, exemplified by *JEAB*, to applied behavior analysis, exemplified by *JABA*.

EXPERIMENTAL CITATIONS IN APPLIED JOURNALS

Although *JABA* is undoubtedly the major outlet for studies in applied behavior analysis, where research is evaluated according to its social significance, methodological rigor, and adherence to the principles of behavior analysis (see Baer, Wolf, & Risley, 1968), several other journals regularly publish such studies (Kazdin, 1975). Among them are *Behavior Modification (BM)*, *Behavior Therapy (BT)* and *Behavior Research and Therapy (BRT)*. We examined the reference list of each article published in these three journals and *JABA* from the first year of their publication through 1979 in an attempt to determine whether citation of basic experimental references had decreased across time. As Pierce and Epling (1980) note, it is very difficult to reliably code specific references as to content, e.g., as "experimental" or "applied," without actually reading each article. Thus, since we were analyzing over 39,000 cited references, we always scored a reference as experimental if it appeared in certain journals or books.

In our first analysis, we simply deter-

mined how often articles published in *JEAB* were referenced in the four applied journals. While it is clear that articles showing clinically important changes in human behavior (i.e., "applied" articles) have appeared occasionally in *JEAB* (e.g., Ayllon & Azrin, 1965; Ayllon & Haughton, 1962; Ayllon & Michael, 1959; Zimmerman & Zimmerman, 1962), as have review, discussion, and technical articles possibly of interest to many behaviorists (e.g., Ferster, 1978; Freund, Sedlacek, & Knob, 1965; Revusky, 1967), the primary purpose of the journal is, and has been, "the original publication of experiments relevant to the behavior of individual organisms" (*JEAB*, inside cover, 1958-present). The demonstration of socially beneficial behavior change is not, and has not been, a criterion for acceptance of articles. Thus, insofar as *JEAB*'s stated review policies have been followed, reviewers have judged all articles published in the journal to make a meaningful contribution to the understanding of behavior per se. Consequently, all *JEAB* articles are considered together here.

While *JEAB* is the primary outlet for original research in the experimental analysis of behavior, considering *JEAB* as the only "experimental" outlet is overly restrictive. Articles relevant to the experimental analysis of behavior appear from time to time in several journals and, in addition, a number of influential books closely related to the field have appeared. In our second analysis, we determined how often articles published in a variety of "experimental" journals and books were referenced in the applied journals. Journals that we considered as "experimental" were *Animal Learning and Behavior*, *Bulletin of the Psychonomic Society*, *Journal of Comparative and Physiological Psychology*, *Journal of Experimental Psychology*, *Journal of Pharmacology and Experimental Therapeutics*, *Learning and Motivation*, *Pharmacology*, *Biochemistry and Behavior Physiology and Behavior*, *Psychonomic Science*, and *Psychopharmacology*. Books considered as "experimental" were *Handbook of Operant Behavior* (Honig & Staddon, 1977),

Hilgard and Marquis' Conditioning and Learning (Kimble, 1961), *Lectures on Conditioned Reflexes* (Pavlov, 1928), *Operant Behavior: Areas of Research and Application* (Honig, 1966), *Schedules of Reinforcement* (Ferster & Skinner, 1957), *Tactics of Scientific Research* (Sidman, 1960), and *The Behavior of Organisms* (Skinner, 1938).

It is clear that our list of "experimental" books and journals is by no means complete, nor is it absolutely compelling. However, each journal selected is at least devoted to empirical research, and is in that sense experimental, while each book is devoted to basic principles and analyses of behavior. Hence, determining how often these books and journals are cited in applied journals may provide a rough estimate of the impact of basic research findings and procedures.

A single observer scored all of the references that appeared in a particular applied journal. That person listed each experimental citation that appeared in a given article, as well as the total number of references cited. A measure of interobserver agreement was calculated by a second observer who independently scored the references that appeared in each journal during one randomly selected year (1974 for *JABA*, 1978 for *BM*, 1975 for *BT*, 1969 for *BRT*), then determining whether she had listed the same experimental citations, and total number of references, as the primary observer. Across all years and journals, the two observers agreed perfectly.

The relative frequency with which *JEAB* and other experimental sources were cited across years in the four applied journals is shown in Figure 1. Three aspects of these data bear note. First, in all years, *JABA* authors cited *JEAB* more often than all of the other experimental sources combined. This pattern was not apparent in the other applied journals. Second, in all journals except *BM*, the percentage of experimental citations decreased progressively across time; *BM* authors rarely referenced *JEAB* or the other experimental sources. The trend toward decreased referencing of experimental sources was most pronounced

in *JABA* and *BT*. In contrast to these journals, *BRT* sometimes published nonhuman studies relevant to human behavior only as analogues. These studies typically cite basic experimental literature which is not germane to articles published in the other applied journals. Third, even in the first year of *JABA*'s publication, relatively few *JEAB* or other experimental references were cited. Experimental citations never comprised more than 16% of the total references in *JABA* and, after the journal had been published for six years, the figure had fallen below 5%, where it has remained. The same is true of the other applied journals, where experimental references have been cited even less frequently.

The foregoing data suggest that the experimental analysis of behavior, represented by *JEAB*, and basic research in general, has decreased to some extent with respect to its influence on applied behavior analysis, represented by *JABA* and the other applied journals. However, one cannot make such a conclusion automatically. As mentioned previously, several early *JEAB* articles demonstrated significant changes in problem behaviors of humans. These articles encompass a majority of "experimental" citations in *JABA*; the vast majority of *JEAB* articles have never been referenced in *JABA*, or other applied journals. It is misleading to suggest on the basis of our data that research published in *JEAB* ever strongly and generally affected *JABA* authors. Only some few studies, unique in both explicating basic behavioral principles and solving behavior problems, seem to have done so. As others have discussed (e.g., Deitz, 1978; Pierce & Epling, 1980), such articles almost never appear today, in *JEAB* or elsewhere.

In any case, it is clear that *JEAB* and the other experimental sources currently are practically never referenced in applied journals. In an attempt to clarify why this is so, and to garner data concerning the general relationship of the experimental analysis of behavior to applied behavior analysis, a questionnaire was sent to the editorial staffs of *JEAB* and *JABA*.

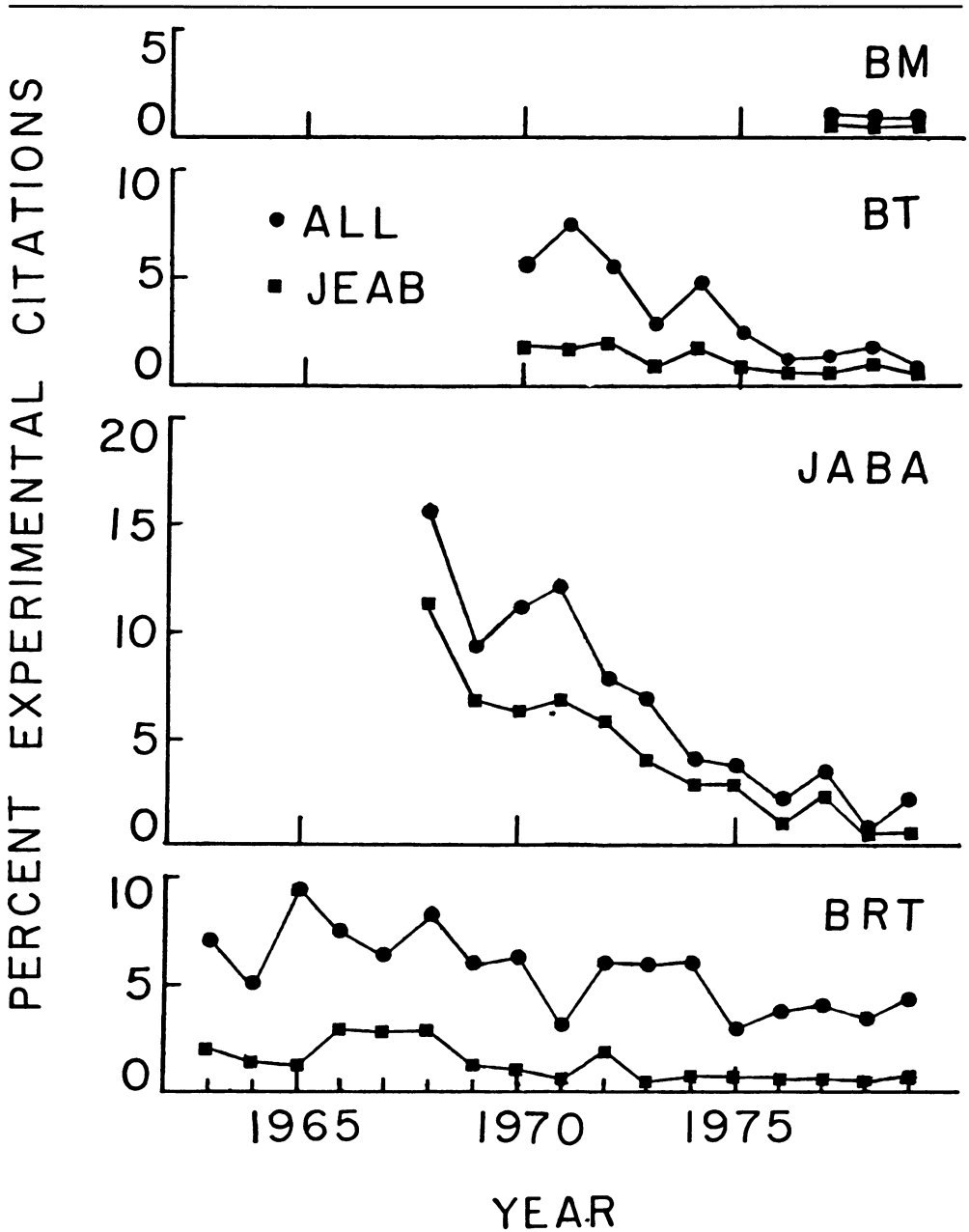


Figure 1. Relative number (percentage of total references) of experimental citations in the four applied journals across years. Circles represent all experimental references combined, including *JEAB*, while squares represent *JEAB* citations alone. Data are expressed as percentages, rather than simple frequency counts, to facilitate comparison across years and journals. Raw data will be supplied to interested readers upon request.

**THE QUESTIONNAIRE:
ITEMS AND RESPONSES**

A 12-item questionnaire, shown in Table 1, was mailed to the editorial staffs

(editor, executive editor, associate editors, board of editors) of *JEAB* and *JABA*. The editorial staff of *JEAB* at the time the questionnaire was mailed (Oc-

Table 1
Questionnaire Sent to *JEAB* and *JABA* Editorial Staffs

1. Please circle each year in which you personally subscribed to <i>JEAB</i> .	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
2. Please circle each year in which you personally subscribed to <i>JABA</i> .				68	69	70	71	72	73	74	75	76	77	78	79	80
3. Please circle each year in which you authored or coauthored one or more articles that appeared in <i>JEAB</i> .	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
4. Please circle each year in which you authored or coauthored one or more articles that appeared in <i>JABA</i> .				68	69	70	71	72	73	74	75	76	77	78	79	80
5. Do you currently read <i>JEAB</i> on a regular basis?																
A. Yes																
B. No																
6. Do you currently read <i>JABA</i> on a regular basis?																
A. Yes																
B. No																
7. Is <i>JEAB</i> of significant value to you in your current research efforts?																
A. Yes																
B. No																
8. Is <i>JABA</i> of significant value to you in your current research efforts?																
A. Yes																
B. No																
9. Across time, research articles published in <i>JEAB</i> have _____ in value to applied behavior analysts.																
A. Decreased																
B. Increased																
C. Not changed																
10. Do you feel that the fields of applied behavior analysis and the experimental analysis of behavior have become increasingly separate from one another?																
A. Yes																
B. No																
11. If your answer to question 10 was "yes," do you feel that the separation of the fields is harmful to behavioral psychology?																
A. Yes																
B. No																
12. Please feel free to comment upon this questionnaire, and the relationship of the experimental analysis of behavior to applied behavior analysis. Thank you for your help.																

tober, 1980) consisted of 32 individuals, while 57 people comprised *JABA*'s editorial staff. One month after the questionnaire was mailed, 36 had been returned by *JABA* editors, while *JEAB* editors had returned 27. Three questionnaires mailed to *JEAB* editors and four mailed to *JABA* editors were returned by the postal service as undeliverable. Thus, a total of 63 of 82 possible respondents, 77%, returned the questionnaire. This return rate is considerably higher than that typically reported in similar surveys, where return rates of less than 60% are common (e.g., Demarest, 1980; Rose, 1972).

A summary of the data collected is pro-

vided in Table 2. From 1965 until 1980, approximately half of the editors of both *JEAB* and *JABA* personally subscribed to each journal during at least one year. However, in 1980, only 30% of *JEAB* editors and 17% of *JABA* editors held joint subscriptions. Very few editors of either journal had published in both; one *JEAB* editor and four *JABA* editors had done so. *JEAB* editors typically read *JEAB* on a regular basis (96% do so), and most (93%) find it of significant value in their current research efforts. Far fewer *JEAB* editors regularly read *JABA* (27% do so), or find it of significant value in their current ventures (23% do so). Almost all *JABA* editors (94%) regularly

Table 2
Summary of Questionnaire Data

1. At some time, the person subscribed to both <i>JEAB</i> and <i>JABA</i> .								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
13 (48%)	14 (52%)	—	19 (53%)	17 (47%)	—			
2. In 1980, the person subscribed to both <i>JEAB</i> and <i>JABA</i> .								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
8 (30%)	19 (70%)	—	6 (17%)	30 (83%)	—			
3. The person has published in both <i>JEAB</i> and <i>JABA</i> .								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
1 (4%)	26 (96%)	—	4 (11%)	32 (89%)	—			
4. Do you currently read <i>JEAB</i> on a regular basis?								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
26 (96%)	1 (4%)	—	4 (11%)	31 (86%)	1 (3%)			
5. Do you currently read <i>JABA</i> on a regular basis?								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
7 (26%)	20 (74%)	—	34 (94%)	2 (6%)	—			
6. Is <i>JEAB</i> of significant value to you in your current research efforts?								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
25 (93%)	2 (7%)	—	7 (19%)	26 (72%)	3 (9%)			
7. Is <i>JABA</i> of significant value to you in your current research efforts?								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
7 (26%)	20 (74%)	—	30 (83%)	5 (14%)	1 (3%)			
8. Across time, research articles published in <i>JEAB</i> have _____ in value to applied behavior analysts.								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Not			Not					
Decreased	Increased	Changed	Other	Decreased	Increased	Changed	Other	
3 (11%)	4 (15%)	15 (55%)	5 (19%)	22 (61%)	2 (5%)	6 (17%)	6 (17%)	
9. Do you feel that the fields of applied behavior analysis and the experimental analysis of behavior have become increasingly separate from one another?								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
20 (74%)	3 (11%)	4 (15%)	30 (83%)	5 (14%)	1 (3%)			
10. If your answer to question 9 was "yes," do you feel that the separation of the fields is harmful to behavioral psychology?								
<i>JEAB</i> Editors			<i>JABA</i> Editors					
Yes	No	Other	Yes	No	Other			
11 (55%)	8 (40%)	1 (5%)	16 (53%)	13 (43%)	1 (4%)			

read that journal, and 83% reported it to be valuable in their current research efforts. *JEAB* is regularly read by relatively few *JABA* editors, 11%, although 17% reported it to be of significant value in their current research efforts. This suggests that, although most *JABA* editors do not regularly read *JEAB*, some articles are of importance to them, a point raised by several respondents.

With respect to the apparent value of research published in *JEAB* for the applied behavior analyst, the responses of

JEAB and *JABA* editors differed. Most *JEAB* editors (55%) indicated that such articles had not changed in value, while the majority of *JABA* editors (61%) indicated their value had decreased.

Perhaps the most interesting information obtained from the questionnaire concerns responses to the questions "Do you feel that the fields of applied behavior analysis and the experimental analysis of behavior have become increasingly separate from one another?" and "If your answer (to the foregoing question)

was 'yes,' do you feel that the separation of the fields is harmful to behavioral psychology?" A significant majority of both *JEAB* editors, 74%, and *JABA* editors, 83%, answered "yes" to the former question. Of the *JEAB* editors who agreed that the fields were growing apart, 55% indicated that the trend was harmful to behavioral psychology, while 40% indicated it was not. (Totals less than 100% result from respondents writing in answers, considered under "Other" in Table 2, to what were intended as forced choice questions.) *JABA* editors responded similarly: 53% of *JABA* editors who affirmed the separation indicated that it was harmful, while 43% indicated it was not.

Due caution is called for in interpreting these data. Forced-choice questionnaires sample at best a limited behavioral repertoire, and are for good reason not favored assessment tools in behavioral psychology. This notwithstanding, responses to the questionnaire do parallel citation data in suggesting that the experimental analysis of behavior, represented by *JEAB*, and applied behavior analysis, represented by *JABA*, are largely insulated from each other. Few of the individuals we queried had published in, regularly read, or benefit from both journals; most indicated the fields are growing apart. To some extent, this may reflect our sample. The editorial staffs of *JEAB* and *JABA* may be particularly "hard-nosed" with respect to their commitment to the experimental analysis of behavior and applied behavior analysis, respectively, and other behaviorists may be more influenced by, and active in, both fields. Nonetheless, the editorial staffs of *JEAB* and *JABA* are especially successful scientists and scholars. They certainly are in a position to influence publication policies, and the behavior of students and colleagues as well. Thus, their evaluation of the relationship between the experimental analysis of behavior and applied behavior analysis is not inconsequential.

It also is not unanimous. Responses to several questions lacked clear consensus, and a marked degree of variability was apparent in the responses of those who

commented in writing on the relationship of the fields (question 12 on the questionnaire). Twelve members of *JEAB*'s editorial staff and ten members of *JABA*'s did so. Ten of the comments we found most interesting appear below, some abridged in the interest of brevity.

From, the *JEAB* editorial staff²:

I believe that sub-fields inevitably grow apart as the whole area grows. This happens in neuroscience, physiology, biochemistry, etc. . . . For example, it certainly is happening in pharmacology, where the pharmacologists are now having trouble convincing all their colleagues that all should go to the same meetings. It must be related to the number of people that can fit into a room—or the amount of money one has to spend on travel. Another example: within the experimental analysis of behavior field, there was founded the Behavioral Pharmacology Society when those operant conditioners working with drugs found it convenient to talk with one another; I just heard of the formation of the Society for the Quantitative Analysis of Behavior (SQAB?), which seems at first to be the publisher of a conference proceedings but may well be the forerunner of something more important. There must be a Law here: each large organization is likely to fission; or, better: "In unity, dissolution." Or something. But I don't think we necessarily have to weep about these trends, although I do think it a shame that students don't get to learn about the fundamentals of their science. It is quite likely that knowledge of the fundamental work will make the applied better—and vice versa.

I think there has been a separation, but it's only the result of the success of applied behavior analysis—it accumulates its own techniques, skills, folklore, which practitioners must learn; this reduces the time they have for "fundamental" literature. Also, and again inevitably, applied behavior analysis is largely founded in the experimental analysis of behavior of 15-25 years ago, hence current developments may seem irrelevant to practitioners, while lab researchers don't find their current interests being explored clinically. But where this does occur, there's immediate interest. To a certain extent, use of more modern experimental analysis of behavior results in applied behavior analysis is likely to be difficult on ethical grounds, insofar as earlier techniques are being successful.

You obviously assume that applied and experimental used to be close at some time. There is no place here for the opinion that they always were separate.

²In a few instances, a respondent's handwriting made it impossible for us to discern a word. When this occurred, we inserted a word that seemed appropriate in context. If this ever altered or distorted the intended meaning, which seems unlikely, we sincerely apologize.

It is clear that applied behavior analysis has been/is/can be of great value to people. The last time I looked, however (1973), I did not feel that work published in *JABA* was of great value to advancing our theoretical understanding of behavior processes (with some exceptions, e.g., Don Baer's work). I believe it is natural and inevitable that the fields grow apart—applied behavior analysis to become a part of mainstream clinical/consulting/community psychology, experimental analysis of behavior to become a part of mainstream theoretical psychology. I think all branches of psychology are still in early stages of development. We don't have anything really profound to offer to the world in terms of deep insight into the processes of human behavior and the "mind." I tend to feel that applied behavior analysis has been oversold (but remember I stopped reading *JABA* in 1973, and maybe the overzealous oversell has been moderated since then) and that psychology should stop pretending to the public that we have serious answers to the serious questions of individuals and society. Our real job, I feel, is to continue basic laboratory research and theory-building. A minority view, no doubt.

I'm pleased that you are raising this issue. The division between the best of the two is artificial. The Giants in application began with and continued in experimental analysis—e.g., Skinner, Azrin, Goldiamond. Both (fields) suffer from decreased interaction. Errors and deficiencies in applied behavior analysis (which result from lack of understanding of the basics) are readily apparent. What is less visible, but maybe more tragic, are the missed opportunities in experimental analysis that would have been developed had applied problems been brought to the awareness of experimentalists. . . .

The *JABA* editors write:

Research published in *JEAB* has decreased in value to applied behavior analysis only relative to the development of a large applied literature.

I think that the applied areas should generate the problems and that the experimental analysis of behavior should help us solve them. Applied behavior analysis apparently is capable of generating its own analyses without the experimental analysis of behavior.

The "break" is, to my estimation, a result of a significant broadening of applied behavior analysis in scope and content. I feel that the experimental analysis of behavior has lagged behind in its development by virtue of excessive rigidity in its paradigms and inbreeding in its thinking. I frequently hear a call to go *back* to experimental analysis of behavior roots, never forward. I fear that an extremely innovative and useful perspective in the past, experimental analysis of behavior is beginning to resemble a closed club in the present. It reminds me (ugh) of the pattern evidenced by the Psychoanalytic movement.

Today's applied graduate students and young Ph.D.'s seem to have learned basic operant prin-

ciples "second-hand," i.e., from *JABA* or/and behavior mod textbooks, with the result that they appear to be good at applying a few basic principles but less able to analyze previously unstudied problems and less able to provide theoretical explanations for their results in terms of basic principles than are researchers who began their training with *JEAB*.

I seriously considered not responding to this questionnaire. Much ado has been made over the past several years on the apparent widening gap between *JEAB* and *JABA* types, and I certainly do not want to be a party to one more song having the same melody. I certainly hope that I have not done so by returning this sheet with responses completed. Furthermore, I hope that, should grouped responses indicate a given outcome, you will not attempt to interpret the underlying reasons for the outcome. For example, I assume that most respondents will answer "yes" to #10. Such an answer does not imply that the fields are no longer valuable to each other. It could merely mean that the fields have gotten more specialized. In addition, years ago, *JEAB* used to publish applied or semi-applied research which it no longer does. Another example. Assuming that a significant proportion of respondents find that the literature in another field is not of great value in their current work, it does not follow that these same respondents regard the other field's literature as unimportant in general. Forgive my ramblings. However, it is my opinion that in recent years, contingencies have operated to create a greater separation of the fields than was the case in the past. Some of these contingencies are important ones and, for better or worse, unalterable. . . .

As is apparent in these provocative comments, many strategies may be adopted in analyzing the relation between applied behavior analysis and the experimental analysis of behavior. It does seem inevitable that within any field so diverse as behavior analysis some degree of specialization will develop. This is not necessarily harmful, although it would be unfortunate if factions of "behaviorists" became so specialized as to adopt idiosyncratic terms and concepts not accepted by other behaviorists. There is some evidence that this is occurring, as exemplified by the several conflicting usages of "discriminative stimulus" (Michael, 1980b), and "differential-reinforcement-of-other-behavior schedule" (Poling & Ryan, in press) currently in vogue, and the growing use of mentalistic terms and concepts within some research areas (see Branch & Malagodi, 1980).

A second, related problem with specialization, if insular, is that potentially

valuable data and innovative procedures may be overlooked if they are not presented within the sources accepted by the specialty area. Some have suggested that this has occurred in applied behavior analysis. For example, Pierce and Epling (1980, p. 1) write:

There is limited use of basic principles in applied analysis today and almost no reference to the current research in the experimental analysis of behavior involving concurrent operants and adjunctive behavior. This divorce of applied behavior research and the experimental analysis of behavior will mitigate against progress toward a powerful technology of behavior.

Perhaps. However, no one has yet made it clear precisely how experimental studies of adjunctive behavior, concurrent operants, or other areas of recent interest (e.g., autoshaping, species-typical behaviors) are useful to the applied behavior analyst. This, we feel, is a largely overlooked aspect of the developing schism between the two specialty areas. Experimentalists consistently and characteristically fail to point out the implications, if any, of their research for those attempting to understand and improve human actions. With the exception of an occasional methodological article, the growing applied literature is almost entirely ignored in *JEAB* articles, and in other experimental sources. For example, in the prestigious *Handbook of Operant Behavior* (Honig & Staddon, 1977), *JABA* citations constitute only 0.3% of a long reference list. This suggests that experimentalists rarely take the tack of addressing problems raised by clinicians—if they did, the place where the problem was voiced most likely would be referenced. Taking such a tack could prove fruitful, as one respondent suggested, and might well help to alleviate some of the stagnation, even mentalism, that appears to be growing in the experimental analysis of behavior (Branch & Malagodi, 1980; Ferster, 1978). At least, attempting to clarify particular issues of clinical relevance would give research a logical focus, and might also increase student interest in and financial support for the area—two things that are sorely needed.

Even when applied issues do not form

the basis for experimental research, findings may be of obvious or potential value for the therapist. Here, it is particularly important that this value be made apparent, and presented in a place and manner where it is accessible to the applied worker. Quite possibly, *JEAB* is not such a place. Nor is the original researcher necessarily the person best able to point out the applied significance of his or her findings. *JEAB*'s publication policies seemingly do not favor a discussion of clinical applications, and many basic researchers may be unaware of, or not care, how their research could benefit the clinician. What may be needed are individuals who serve as liaisons between the experimental analysis of behavior and applied behavior analysis, behavioral scientists conversant with both fields who discuss fruitful links between them in a forum accessible to both—perhaps at the annual meetings of the Association for Behavior Analysis. In the past, Skinner single-handedly performed this chore; his early writings (e.g., 1938, 1953) considered at length how laboratory work with nonhuman subjects contributed to enhanced understanding, and better control, of human activities. In recent years, he has not addressed how specific experimental research relates to human behavior change, and this important issue has been largely overlooked. However, recent articles by Pierce and Epling (1980) and Foster (1978) suggest this may be changing, a move that would be applauded from this quarter.

Nonetheless, we do not advocate that all work in the experimental analysis of behavior address, or be interpreted in terms of, the needs of the applied behavior analyst. To do this would be to make our professional journals read like the obligatory "social significance" paragraph too often appended to grant applications seeking funds to support basic research. It is to be expected, and hoped, that much experimental work will continue in the areas of animal behavior and basic learning theory and will relate most indirectly, if at all, to applied behavior analysis. These research areas stand on their own merits.

The gulf between applied behavior analysis and some areas of the experimental analysis of behavior is wide and unbreachable. That is no cause for concern: One behaviorist can reasonably study food burying by rats, another the treatment of self-abuse by retarded persons. Neither's work is related to the other's, although they share a common philosophy, methodology, and tradition. It is cause for concern when scientists ignore, through ignorance, oversight, or provincialism, work of others that could beneficially influence their own activities. We hope workers in applied behavior analysis and the experimental analysis of behavior escape this trap.

REFERENCES

- Ayllon, T. & Azrin, N. H. The measurement and reinforcement of behavior of psychotics. *Journal of the Experimental Analysis of Behavior*, 1965, 8, 357-383.
- Ayllon, T. & Haughton, E. Control of the behavior of schizophrenic patients by food. *Journal of the Experimental Analysis of Behavior*, 1962, 5, 343-352.
- Ayllon, T. & Michael, J. The psychiatric nurse as a behavioral engineer. *Journal of the Experimental Analysis of Behavior*, 1959, 2, 323-334.
- Baer, D. M., Wolf, M. M., & Risley, T. R. Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1968, 1, 91-97.
- Branch, M. N., & Malagodi, E. F. Where have all the behaviorists gone? *The Behavior Analyst*, 1980, 3, 31-38.
- Deitz, S. M. Current status of applied behavior analysis: Science versus technology. *American Psychologist*, 1978, 33, 805-814.
- Demarest, J. The current status of comparative psychology in the American Psychological Association. *American Psychologist*, 1980, 35, 980-990.
- Ferster, C. B. Is operant conditioning getting bored with behavior? A review of Honig and Staddon's *Handbook of Operant Behavior*. *Journal of the Experimental Analysis of Behavior*, 1978, 29, 347-349.
- Ferster, C. B., & Skinner, B. F. *Schedules of reinforcement*. New York: Appleton-Century-Crofts, 1957.
- Foster, W. S. Adjunctive behavior: An underreported phenomenon in applied behavior analysis. *Journal of Applied Behavior Analysis*, 1978, 11, 545-546.
- Freund, K., Sedlacek, F., & Knob, K. A simple transducer for mechanical plethysmography of the male genital. *Journal of the Experimental Analysis of Behavior*, 1965, 8, 169-170.
- Hayes, S. C., Rincover, A., & Solnick, J. V. The technical drift of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1980, 13, 275-286.
- Honig, W. K. (Ed.). *Operant behavior: Areas of research and application*. New York: Appleton-Century-Crofts, 1966.
- Honig, W. K., & Staddon, J. E. R. (Eds.). *Handbook of operant behavior*. Englewood Cliffs, NJ: Prentice-Hall, 1977.
- Kazdin, A. E. The impact of applied behavior analysis on diverse areas of research. *Journal of Applied Behavior Analysis*, 1975, 8, 213-229.
- Kimble, G. A. *Hilgard and Marquis' conditioning and learning*. New York: Appleton-Century-Crofts, 1961.
- Michael, J. Flight from behavior analysis. *The Behavior Analyst*, 1980, 3(2), 1-24. (a)
- Michael, J. The discriminative stimulus or S^D. *The Behavior Analyst*, 1980, 3(1), 47-50. (b)
- Pavlov, I. P. *Lectures on conditioned reflexes*. Translated by W. H. Gantt. New York: International, 1928.
- Pierce, W. D., & Epling, W. F. What happened to analysis in applied behavior analysis? *The Behavior Analyst*, 1980, 3(1), 1-9.
- Poling, A., & Ryan, C. Therapeutic applications of differential-reinforcement-of-other-behavior (DRO) schedules: A review. *Behavior Modification*, in press.
- Revusky, S. H. Some statistical treatments compatible with individual organism methodology. *Journal of the Experimental Analysis of Behavior*, 1967, 10, 319-330.
- Rose, R. M. Supply and demand for psychology PhDs in graduate departments of psychology: 1970 and 1971 compared. *American Psychologist*, 1972, 27, 415-421.
- Sidman, M. *Tactics of scientific research*. New York: Basic Books, 1960.
- Skinner, B. F. *The behavior of organisms*. New York: Appleton-Century-Crofts, 1938.
- Skinner, B. F. *Science and human behavior*. New York: Free Press, 1953.
- Zimmerman, E. H., & Zimmerman, J. The alteration of behavior in a special classroom situation. *Journal of the Experimental Analysis of Behavior*, 1962, 5, 59-60.