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9: Procedures in Common Described by a Common Language

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Those readers who know me, know that I believe the “eternally true” statement of the wise man of Ancient Egypt, that “this too shall come to pass.”¹ This includes almost everything presented at the Institute upon which this volume is based. The important thing is: How will this change come about? How will the current approaches to behavior modification pass away? Will it require a totally new discipline? Is our legacy no more than 50 years of superstition? Will some bright, young kids, of a decade hence, find us wrong and have to attack and destroy us to bring about change?

I believe that the most important thing about science is that it can modify its own behavior. The more precisely a discipline does this, the more scientific it is. If we in behavior modification can build systems for improving our own performance, then we shall not pass away. Rather we shall constantly improve—the grandfathers who presented information in this volume will all have prolific and successful grandchildren. On the other hand, if we start repeating over and over again some catechism—“stimulus, response, reinforcing stimulus, schedules of reinforcement,” ad infinitum, we will change nothing. Then we would end up just as superstitiously redundant and data-poor as the present day Freudians.

Two things are making it difficult for us to change. One is our ex-

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I extend my gratitude to the other speakers at the Symposium for stimulating and contributing to this summary and to Eric Haughton for his help in recording the rates.

treme popularity. The second is our reliance on verbal stimulation. There are few experienced operant conditioners in the country. The current speaking demand is so great, that the free-operant conditioners are spread extremely thin. For example, you can ask yourself: What new thing has come to free-operant conditioning or to behavior modification in the last 5 years? Most of us are so busy talking that we seldom look and hence more rarely do we discover.

SYMPOSIUM SUMMARY

I was asked to summarize the Institute. My summary will be an experiment. I will use the methods of Behavior Modification to summarize a Behavior Modification Symposium. I will practice what I preach. This is the way to stay relevant. As I struggle downhill from 40 to 60 to 80 to the grave, I will do all I can to keep operant conditioning modifying itself and applying its own principles to itself. For the time being, let us not be content with improving the behavior of an

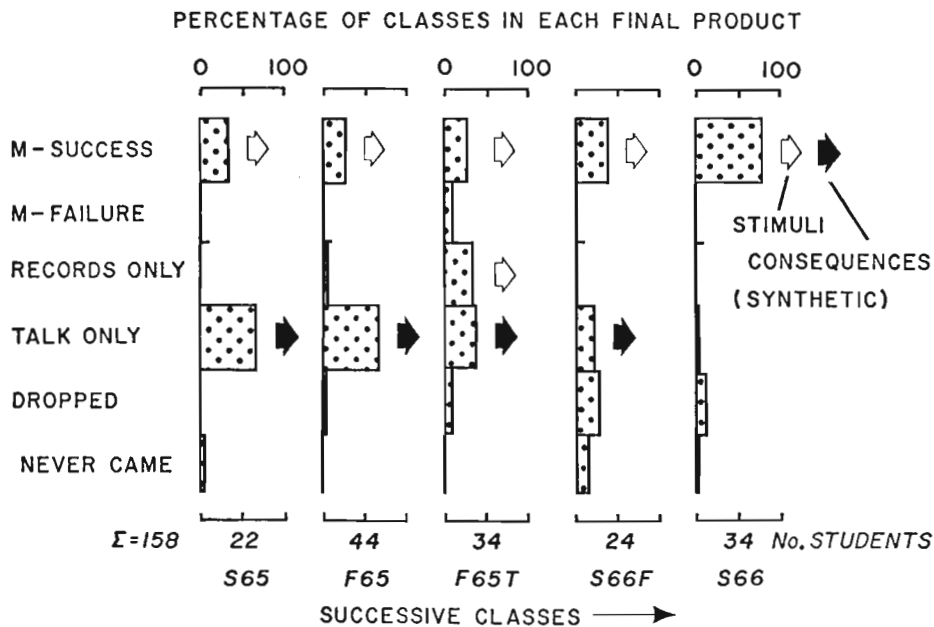


FIGURE 9.1 Successful modifications increased 228 percent when required for a passing grade in a university course (Education 115). "I" was given for incomplete modification and "F" for falsified data.

autistic child, when we have one superstitious free-operant conditioner loose at the full professor level.

Figure 9.1 proves that I can take some of my own medicine. This figure indicates my failure for four semesters as a university professor. I spent time spraying words on students, begging teachers to do more than beg their children. I tried to stimulate people into using consequences, and got a 30 percent payoff. Only 30 percent of my class successfully modified a child's behavior when I begged them to do it. These are what I call the "stimulus responders." The rest of them only talked good Behavior Modification—they didn't do any. These glib failures—the "talkers" included my own doctoral candidates; they gave me beautiful excuses in operant terminology of why the child was still wetting the bed at the end of the semester. Obviously, they didn't have a conditioned reinforcer to make the mother do something—but the bed was still wet in the morning. Three or 4 weeks through the Spring semester, it dawned on me that I wasn't taking my own medicine. I wasn't using any consequences. My successful students weren't being treated any differently from the glib failures.

Then I announced, "Kids, the world has changed. I have caught myself making a terrible error. You can drop the course if you want to; but from now on, if you fail to improve a child's behavior beyond the .001 level of confidence, you will receive a grade of 'incomplete,' for 'incomplete modification.' The grade 'F' will be used for 'falsified data'."

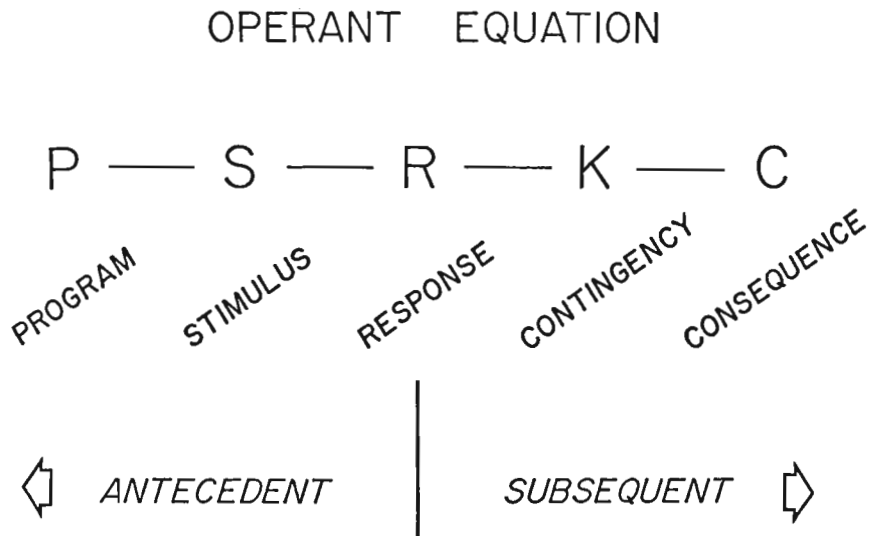


FIGURE 9.2 *Operant Equation used to summarize the content of each presentation of the symposium.*

This procedural change brought about fantastic results: 228 percent successful modification projects because 54 percent of the students turned in more than two projects. I had required only one. With that success, I later increased the requirement to three cases a semester. Already halfway through the semester most have completed their projects. The next requirement will be eight projects—who knows what the upper limit might be. There is only one way to find out!

In Figure 9.2, the basic operant equation is diagrammed. The five basic components of the equation are the program (P)—stimulus (S)—response (R)—contingency (K)—consequence (C). Ferster and Skinner (1957) did almost all their classic research on contingencies. This is really what we were in the later 1950s—world's experts on contingencies. We held responses (pigeon pecking or rat pawing) constant. We held consequences (pigeon grain or rat pellets) constant. We varied only the contingencies to study their effects.

This operant equation was used to analyze the behavior of our symposiasts. I asked one of my most hard working graduate students, Eric Haughton, to sit in the audience and record the comments made by each participant. He used the following categories: (1) the speaker mentioned something about a program (P); (2) he spoke about the stimulus (S); (3) he mentioned something about responses (R); (4) he referred to the contingency (K); or (5) he spoke about the consequences (C). Eric also separately recorded the rates of mentioning accelerating consequences (AC), decelerating consequences (DC) and withdrawing consequences or inconsequence (I).

SUMMARY OF CONTENT OF EACH PRESENTATION AND ITS DISCUSSION

In Figure 9.3, Don Baer's lecture is analyzed. He mentioned programming (P) very seldom—only .06 times per minute. Stimuli (S), responses (R), and contingencies (K) were mentioned at rates between .7 and .8 times per minute. Accelerating consequences (AC) were his most frequent topic; referred to over once a minute! He made no mention of decelerating consequences (DC). Inconsequence (I) was the method, described at a frequency of twice every 10 minutes, he used to eliminate undesirable behavior.

In their discussion of Baer's lecture, the audience asked him about responses (R), contingencies (K), accelerating consequences (AC), and inconsequence (I). In other words, the audience asked him to discuss the traditional free-operant procedures and components—whereas Baer had gone beyond that limited frame of reference in his lecture.

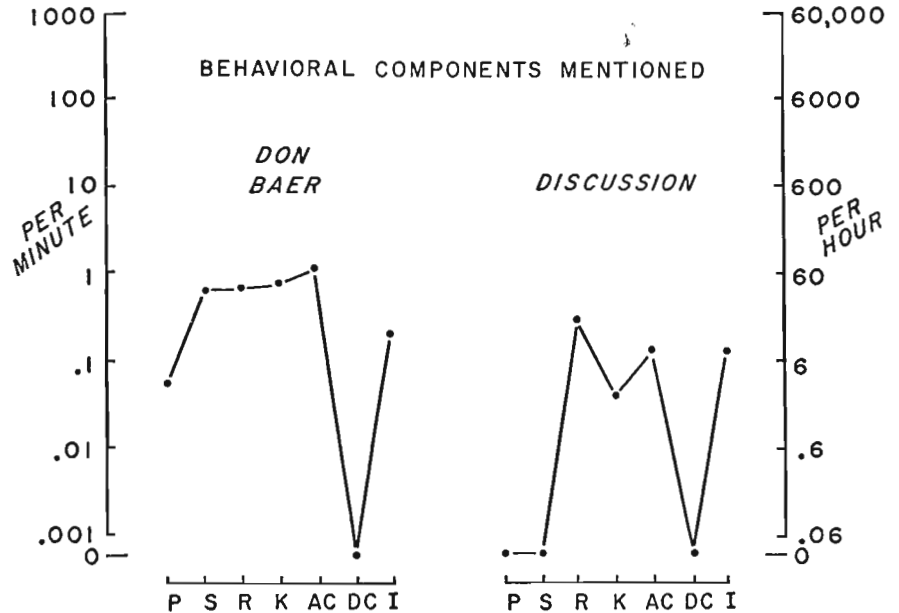


FIGURE 9.3 *Baer's lecture is low on programming and totally avoids decelerating consequences. The discussion tries to narrow him further by ignoring his references to stimuli.*

He received no question about the stimuli that he mentioned as often as he did responses!

If such discussions function as accelerating consequences to Baer, he could become a mere caricature of his former self as the audience shapes his lectures to fit their mold!

Figure 9.4 presents Ivar Lovaas's lecture rates. It is a pretty even profile actually, more so than Baer's because Lovaas is not afraid to mention decelerating consequences. He was a little low on his references to contingencies. However, much of his work involves shaping, and shaping is almost always a one-to-one fixed ratio contingency. In Lovaas' discussion the audience only wanted to hear about punishment—responses, contingencies, and decelerating consequences! It appears that the audience asked the speakers about what they had heard about them prior to the lecture. Lovaas is gossiped about as an expert on decelerating consequences. They didn't ask him about what he said in his lecture. They didn't ask him about programs, stimuli, accelerating consequences, or in consequence—all of which he referred to. They asked him only

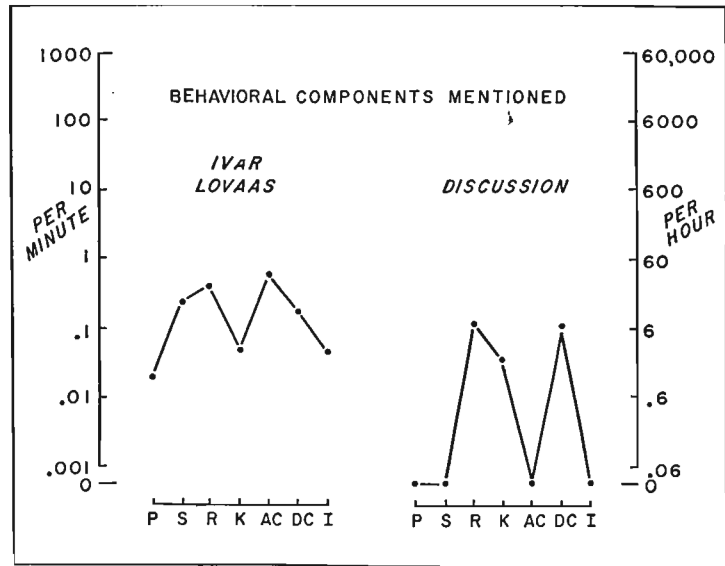


FIGURE 9.4 *Lovaas mentioned responses and accelerating consequences most frequently, but the discussion did not reflect this. The audience caricatured him as "Mr. Punishment."*

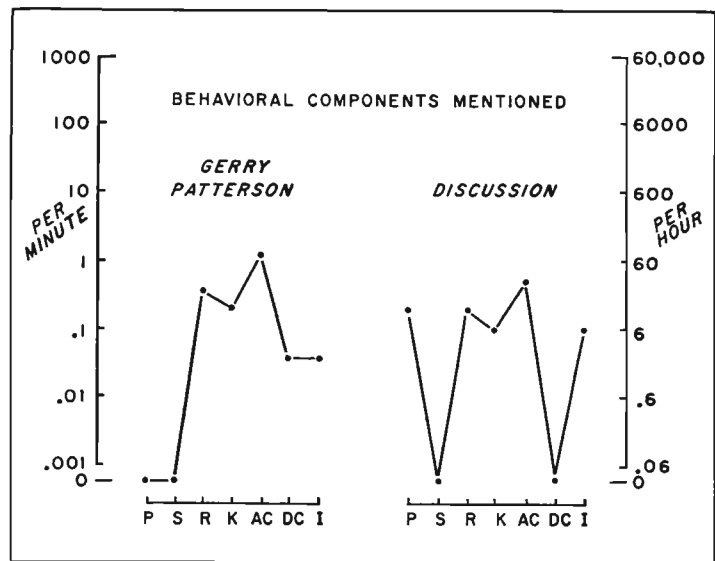


FIGURE 9.5 *Patterson mentioned decelerating consequences as often as in consequence, but the audience ignored this.*

about decelerating consequences which he had mentioned only .2 times per minute. They failed to ask him about accelerating consequences which he mentioned over .6 times per minute—three times as often as decelerating consequences! In such ways are caricatures maintained and straw-men built! Ivar, please ignore them and go your own way!

Figure 9.5 analyzes Gerry Patterson's lecture. On the lecture chart Gerry holds his own. He is very good at this new form of publication, oral presentation.² He talked mostly about responses, contingencies, and consequences, all at rates above .2 per minute. He did not mention programming or stimuli. He was more or less traditionally free-operant in his point of view except for mentioning decelerating consequences as often as inconsequence. The traditional free-operant man would not mention decelerating consequences.

Patterson's audience ignored his reference to decelerating consequences and curiously queried him about programs which he did not mention at all.

Israel Goldiamond's presentation was next. I thought Goldiamond made one of the best presentations. Figure 9.6 reveals that he delivered

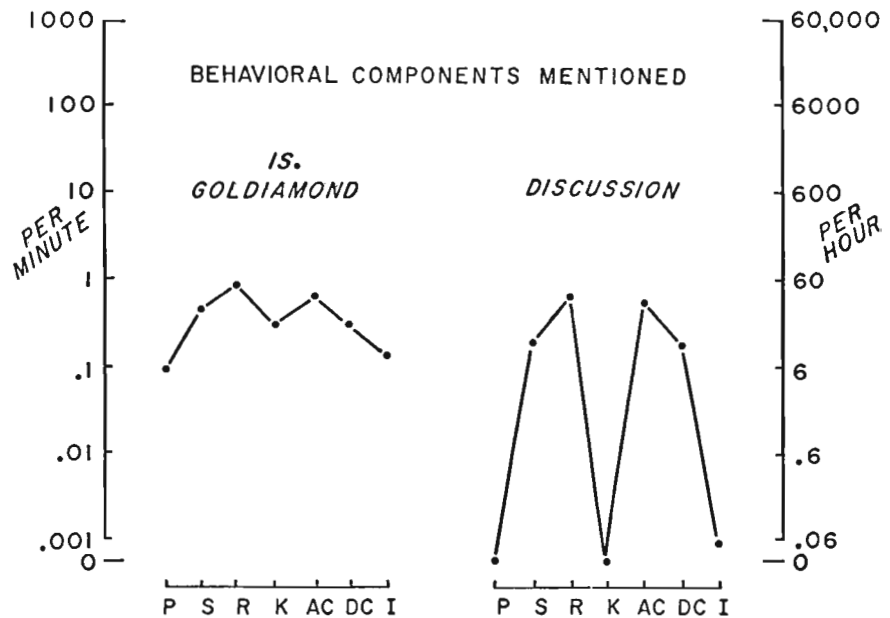


FIGURE 9.6 Goldiamond had a fairly even profile in his talk. However, the discussion concentrated on stimuli (S), responses (R), accelerating (AC), and decelerating (DC) consequences. The discussion ignored programs (P), contingencies (K), and inconsequence (I).

about the most even or complete operant profile of all the speakers. He mentioned programs about once every 10 minutes and responses about once a minute. However, the reactions to Goldiamond involved no questions on programming, none on contingencies, and none on inconsequence. So here again, the audience narrows and caricatures an even and complete free-operant presentation.

Figure 9.7 represents Ted Ayllon's speech and its discussion. He mentioned all five components but referred to the traditional free-operant trinity of response (R), contingency (K) and accelerating consequence (AC) from 10 to 100 times as often as the other components. His discussion was representative of this profile, though depressed in rate.

Figure 9.8 shows Jack Michael's speech and discussion rates of mentioning free-operant components. Jack mentioned all components except programs at high rates between 0.1 and 1.0 per minute. Michael's discussion was somewhat aborted because the session lasted a little too long. When Michael and Goldiamond started a private discussion, the audience began to leave. The moment they turned to talk to each other, 10 people stood up. Jack Michael noticed them leaving and terminated before he was completely finished. This indicates that both the speaker and the audience each had control over the other.

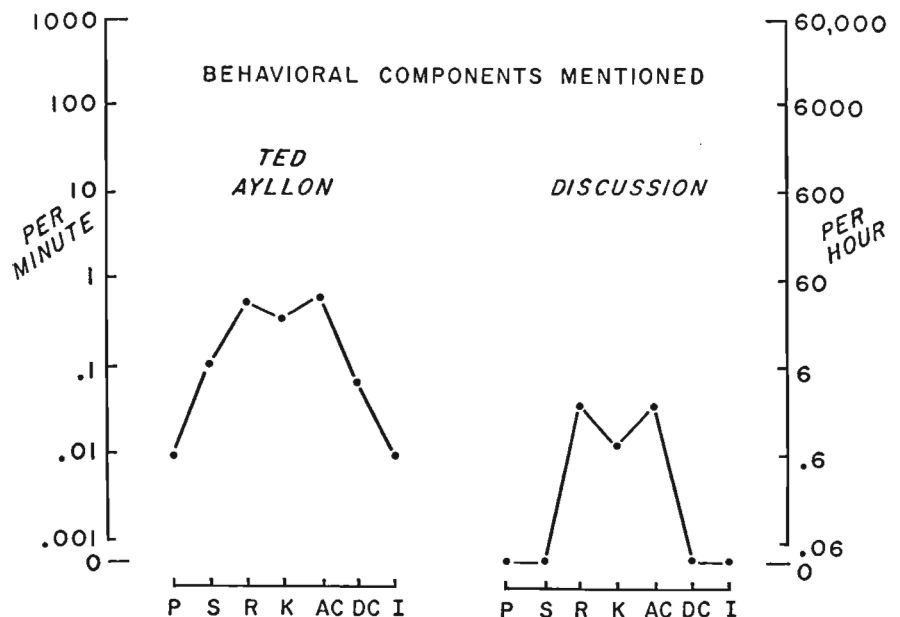


FIGURE 9.7 *Ayllon's talk covered all behavioral components, but the discussion caricatured him as a traditional R-K-AC mid-'50s type of operant conditioner.*

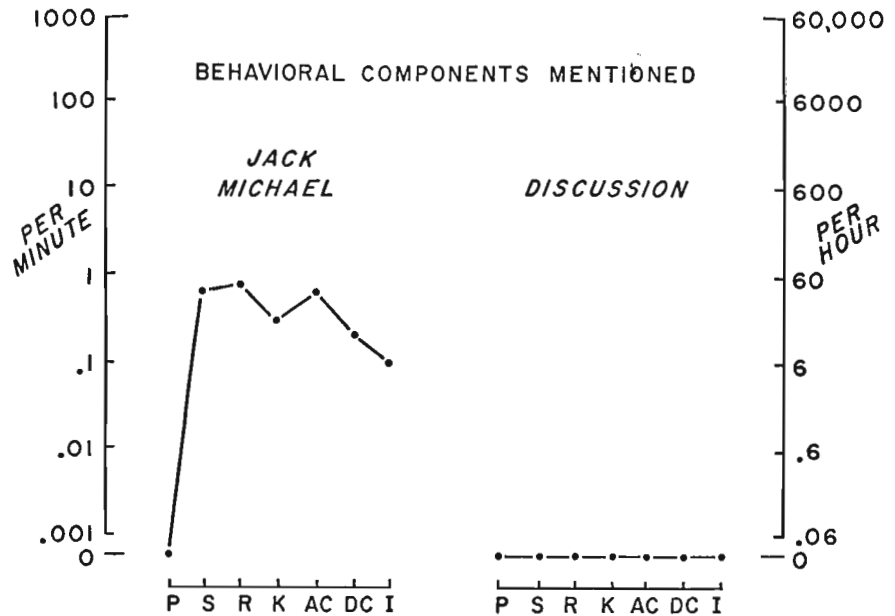


FIGURE 9.8 *Michael's talk was fairly even except for no programming references, but the discussion was interrupted by a private conversation.*

Figure 9.9 contains the component mentioned rates for Roger Ulrich's presentation. Roger discussed all free-operant components from .04 to over 2.0 per minute. He mentioned stimuli more often than contingencies which is certainly not following the traditional "R-K-C" party line! The audience was remarkably faithful to his presentation in its discussion as it questioned at a somewhat lower component rate, but along a very similar profile.

Figure 9.10 presents Fred Kanfer's lecture profile. This again shows a remarkably eclectic profile for a free-operant type. However, his highest mentioning rates were for responses and accelerating consequences. His discussion faithfully follows his lecture profile but is exaggerated as the audience fails to mention contingencies (K) or inconsequence (I).

In figure 9.11 the component mentioning rate profiles for Malcolm Kushner's lecture and its discussion are presented. Here again we see an exaggeration of the lecture in its discussion except for one slight change where the discussion covers decelerating consequences at a higher rate than did the lecture. It looks like they are trying to make him into a "punishment man" along with Lovaas.

In Figure 9.12, I have presented my own component rates for this presentation and its subsequent discussion. This obviously was inserted

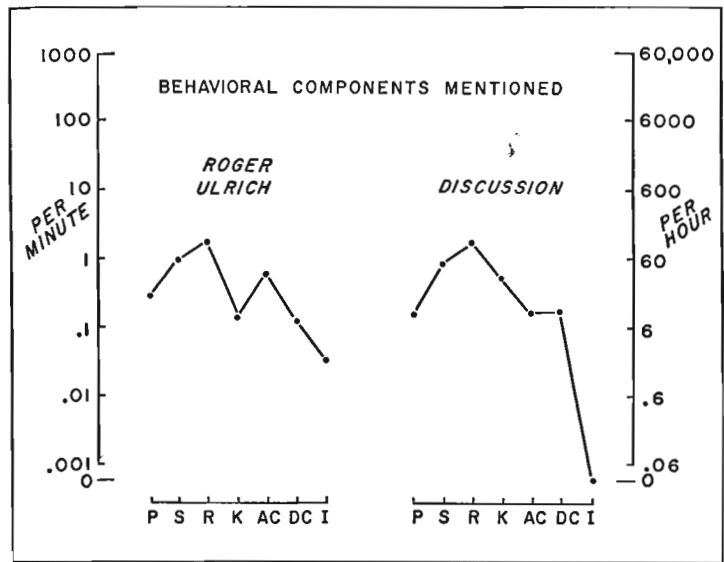


FIGURE 9.9 *Ulrich's presentation was fairly well balanced with more stress on stimuli and responses than the other components. The discussion ignored his references to inconsequence.*

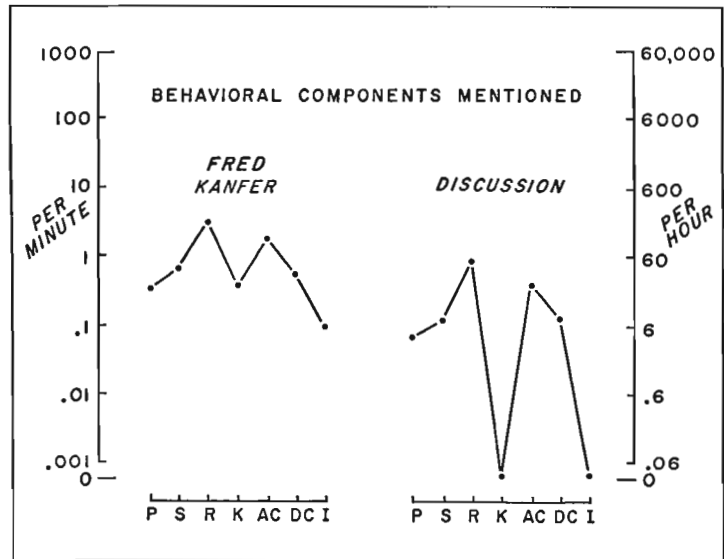


FIGURE 9.10 *Kanfer presented a well balanced lecture, but the audience again exaggerated his small rate differences into a caricature with no references to contingencies or inconsequence.*

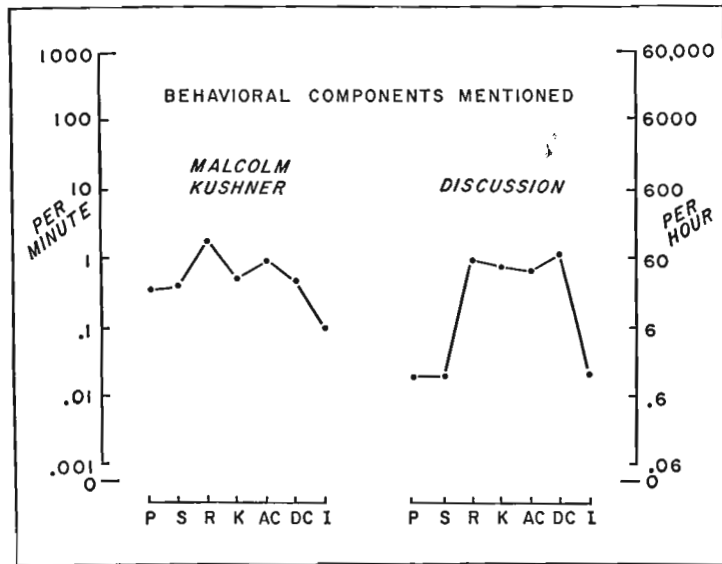


FIGURE 9.11 *Kushner's lecture and its discussion were both fairly well balanced presentations of all behavioral components. Again, though, the audience exaggerated the small rate differences in the presentation.*

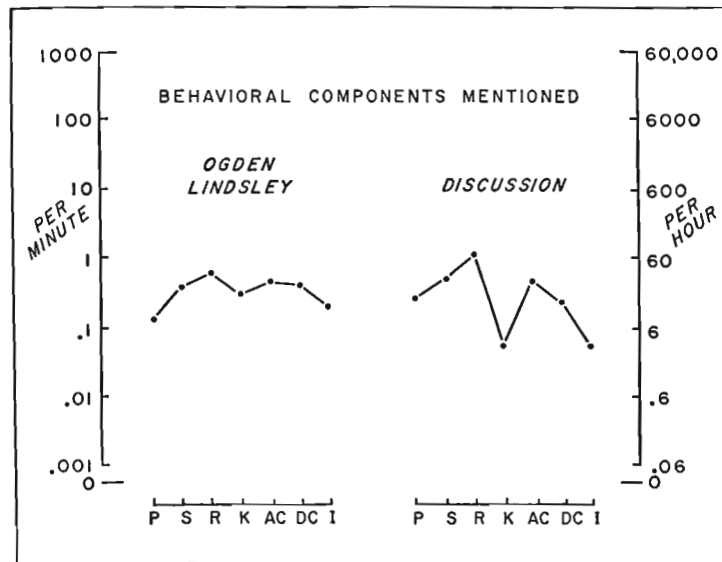


FIGURE 9.12 *Lindsley's presentation and its discussion covered all behavioral components at moderately high rates, but the audience's tendency to exaggerate small differences is still seen in the discussion profile.*

after the talk and was not part of the original audio-tape recording. Here again all components are mentioned at rates between .1 and .6 per minute and the discussion is an exaggeration or caricature of the lecture profile.

SUMMARY OF COMPONENTS COVERED BY ENTIRE SYMPOSIUM

Figure 9.13 is a summary of all ten presentations in the symposium. The median mentioning rates for each component are connected to reveal a "symposium profile." The ranges are drawn in as vertical lines. In a way, the generalists, the historians, and the textbook writers are right. We are, as a group, strong on statements about responses (.7 per minute), contingencies (.3 per minute), and accelerating consequences (.7 per minute). However, we mentioned stimuli at a higher rate (.4 per minute) than we did contingencies. This is quite remarkable when

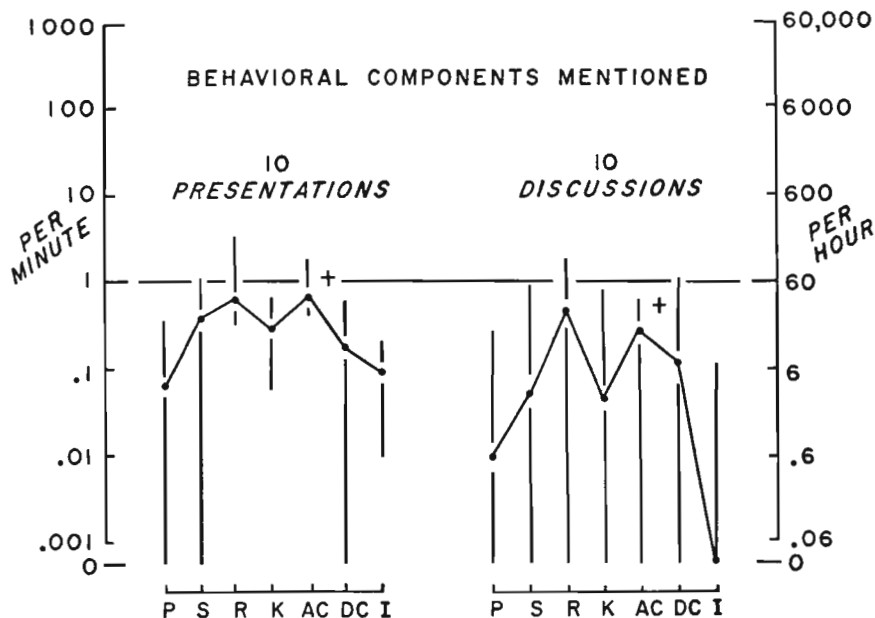


FIGURE 9.13 Medians (connected dots on the graph) and ranges (the vertical lines) of the mentioning rates for all seven behavioral components by the ten symposiasts. The tendency for the audience to exaggerate the small rate differences from the presentations in their discussion questions shows up here even in the grouped (medians) rates.

you consider our claim to fame is that we are world's experts on contingencies—yet we talk about stimuli just as often!

It seems clear to me that Behavior Modification and free-operant conditioning will stay strong as long as most of us continue to pay attention to all components of the operant reflex. I feel that the strongest and most creative behavior modifiers are those whose lecture profiles include all operant behavioral components.

RANKING OF DELIVERY AND CONTENT

Since I had become involved in analyzing part of these results after the actual presentation of this paper in order to include my own performance rates, we thought it best to have members of the audience rank each participant in both quality of delivery and quality of content. Ten members of the audience representing three university departments did the ranking. None of those ranking had been involved in recording the performance rates, nor were they being advised by either Baer or Lindsley, the two University of Kansas members of the symposium. The delivery rankings and the content rankings are highly correlated with a correlation coefficient of $+.80$ and a probability that this would happen by chance of less than $.00004$. The median rankings for each participant on both delivery and content are almost exactly the same except for one inversion. Figure 9.14 presents the median rankings of each participant for both delivery and content.

COMPARISON OF DELIVERY RATE AND STYLE WITH RANKING

In addition to recording the rates of mentioning the different behavioral components, other graduate students recorded the rate of laughs produced in the audience, the rate of presenting slides and other visual aids, and the total frequency of mentioning major points for each participant. It was hoped that the rate of mentioning major points would indicate the speed of covering content or "pacing" of each lecture. The audience laugh rate should indicate how humorous or "entertaining" the lecturer was. The slide presentation rate would record the use of visuals.

Figure 9.15 presents these three movement rates for each participant. The participants are ranked on the basis of the overall rank of the lecture taken from Figure 9.14.³ It is clear that the highest ranked presentation tended to cover major points at the lowest rates. The poorer ranked lecturers tried to cover close to ten points per minute! Whereas,

the more highly ranked speakers didn't cover more than two points per minute.

The more highly ranked lecturers produced higher laugh rates in the audience. The laugh rates varied from one every hundred minutes to one a minute—a frequency range of over 100 times. Note that the top four ranked participants, ranked top in both delivery and content, produced the highest audience laugh rates—all above .5 per minute! Although this may seem a very high rate of laughter, it is from 4 to 10 times slower than the laughter produced by professional entertainers. Harold Ensley, a local Kansas City sports fisherman, and Johnny Carson of the "Tonight Show" and national TV fame both regularly produce around 4.0 laughs per minute in their monologues. Interestingly enough, both are outproduced by Joan Rivers, a professional gag writer turned entertainer, who guffaws an audience at the rate of 8 laughs per minute! No one knows what the ideal or maximum laugh rate is for a professor, but we are now in a position to find out with precise recording of rates.

The slide presentation rates show that it is not necessary to use visual aids to deliver a highly ranked lecture, nor to get high laugh rates (neither Baer nor Patterson used any). However, it does appear that, if slides are used, the more highly ranked lecturers use them at higher rates than do the lower ranked lecturers.

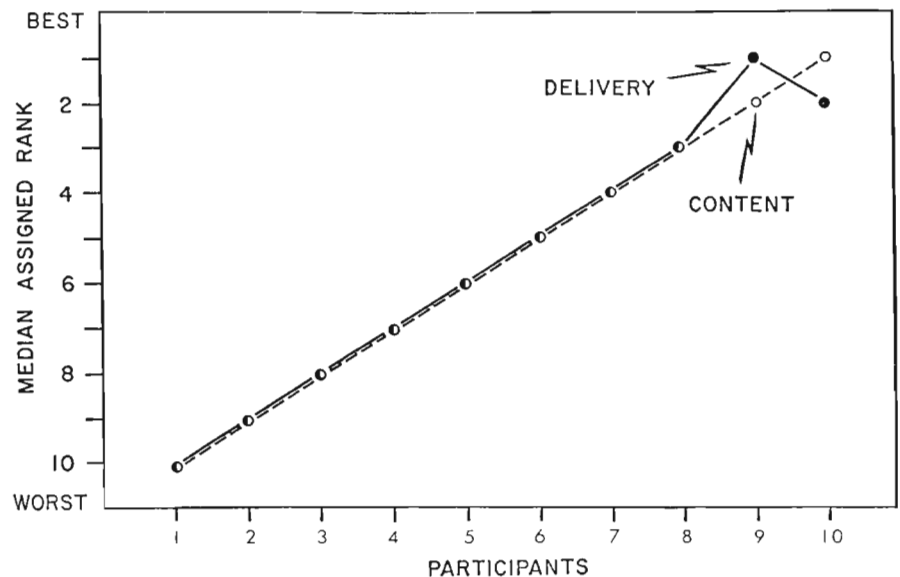


FIGURE 9.14 Median ranks assigned for both delivery and content are identical except for one inversion.

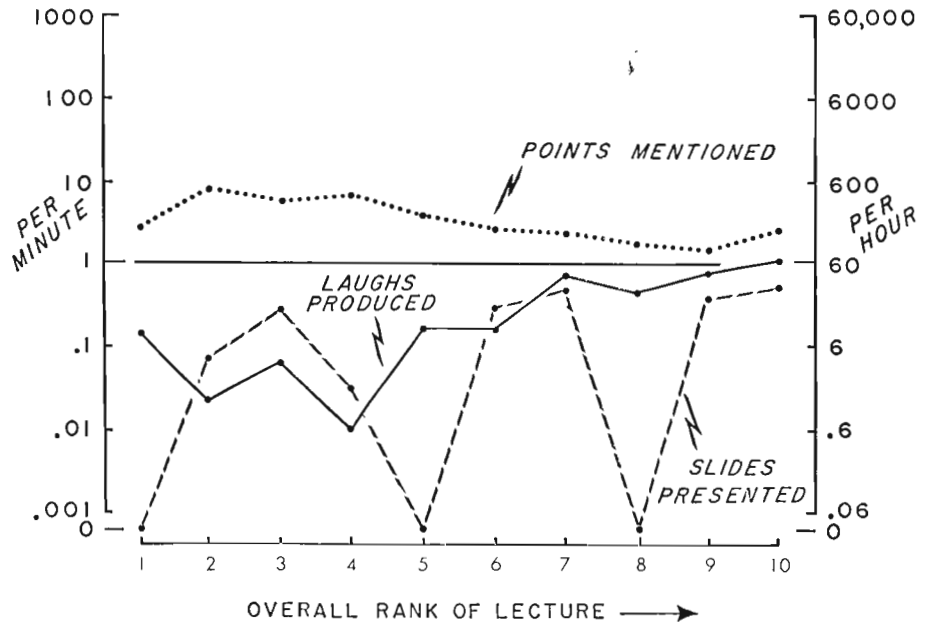


FIGURE 9.15 A summary graph for comparing rates of making major points, producing laughs and presenting slides shows that the most highly ranked lecturers cover less ground with more laughs and more slides.

In summary then, if one rates the rates of rate specialists presenting their rates, the most highly rated make two points, a half a slide, and a laugh per minute!

NOTES

1. Wiseman, A. E. Personal Communication, Cairo, July, 1944.
2. If lectures are oral, what are printed publications?
3. This concluded my experimental summary of the symposium. The remainder of the time allotted to me at the symposium was spent in reporting twelve sample modification projects. These projects have been reported elsewhere on film and in print, and things are moving so fast that I am sure most readers will have conducted modification projects of their own every bit as good. So, why add bulk to an article that has already made its point? (See Lindsley, 1968.)

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