THE ROLE OF LANGUAGE IN BEHAVIOR

Technical Report Number 8

EFFECT OF ORDER IN AN ARGUMENTATIVE SPEECH[1]

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In 1946, Sponberg reported a study in which a twenty minute speech, containing three arguments was presented orally via recording to two matched audiences in climax order (least important argument first) and in anti-climax order (most important argument first).[2] The investigator found a clear cut advantage for anti-climax order in respect to retention and also in respect to the shift of attitude caused by the most important argument.

The purpose of the present report is to describe the outcomes of two experiments incorporating the same general features of design employed by Sponberg. The objective was to test the consistency of his results, and to broaden the sample of speech topics.

METHOD

Study #1 carried out during the winter of 1953 made use of two speeches. The first speech on "Defer marriage until your military service is completed" corresponded with slight modification to the subject material used by Sponberg, while the second speech dealt with the proposition "The 18 year old should be allowed to vote."

Five supporting arguments for each proposition were presented to forty-four students, similar in background to the experimental group, who were told to give a rank of 1 to the argument they considered most important, 2 to the argument they considered next most important, etc., until they had ranked each of the five supporting arguments. Results are given in Table I.

Sub-group analysis on the basis of sex and attitude toward the proposition did not reveal any significant deviations from the average rankings given in Table I. Three arguments differing distinctively in average rank were then selected for each proposition. (Table II)

2. Sponberg, Harold. "The Relative Effectiveness of Climax and Anti-Climax Order in an Argumentative Speech", Speech Monographs, XIII, 1946, 35-44.

Table 1

Rank Value of Supporting Arguments

Proposition: A young man subject to military service should defer marriage until that service is completed.

Supporting Arguments:	Average Rank
1. because marriage would prevent him from becoming an effective soldier.	4.58
2. because of the danger that he will become a crippled dependent.	3.23
3. because he will be financially unable to support a wife.	2.90
4. because the period of separation may become unpredictably long.	2.14
5. because such a marriage might be hasty and ill-advised.	2.14

Proposition: The voting age should be lowered to 18.

Supporting Argument:	Average Rank
1. because the eighteen year old of today is better informed than in previous generations.	1.89
2. because the government assumes the eighteen year old can bear other adult responsibilities at that age.	1.68
3. because our government lags far behind other countries in lowering the voting age requirement.	4.80
4. because young people make more use of their voting privilege than do their elders in society.	3.18
5. because such a reduction in the age limit has worked successfully when it has been tried.	3.45

Table II

Supporting Arguments Included in the Speeches

Argument	Average Rank
1. because such a marriage might be hasty and ill advised.	2.14
2. because of the danger that he will become a crippled dependent.	3.23
3. because marriage would prevent him from becoming an effective soldier.	4.58
1. because the government assumes the eighteen year old can bear other adult responsibilities at that age.	1.68
2. because young people make more use of their voting privilege than do their elders in society.	3.18
3. because our government lags far behind other countries in lowering the voting age requirement.	4.80

The speeches were then prepared and factual material, statistical evidence, analogy, and authority were used to support each of the arguments. The amount of space given to each argument was directly proportional to its rank value. (Table III).

Table III

Time Alloted to Each Argument

Argument	Speech on Marriage	Speech on Vote
Introduction	1 minute, 50 seconds	1 minute, 50 seconds
Large Argument	7 minutes	6 minutes, 30 seconds
Medium Argument	4 minutes	4 minutes
Small Argument	2 minutes, 30 seconds	2 minutes, 30 seconds

A skilled speaker read the speech while two identical and simultaneous tape recordings were made of each speech. This was accomplished by leading the microphone signal to the amplifier and then through a wall circuit to an adjoining room. A divided connection lead the signal to two similar tape recorders so simultaneous recording in climax order could be done. One tape was then cut and spliced so that the arguments were arranged in anti-climax order. Care had been taken in writing the transitions of the speech so that such rearrangement could be accomplished without changing the meaning of the speech. The order, large argument, medium argument, small argument became the anti-climax form of presentation, while the order, small argument, medium argument, large argument became the climax order of presentation.

Subjects used in study #1 were students enrolled in the Fundamentals of Speech sequence at the University of Minnesota (Minneapolis campus) during the winter quarter of 1953. One week prior to the testing day, all subjects were asked to fill out "A Preliminary Questionnaire for a Listening Project". Each subject gave his name, age, sex, college grade average, college classification and indicated his attitude on the two propositions:

_____A young man subject to military service should defer marriage until that service is completed.

_____The voting age should be lowered to eighteen.

Attitude was indicated numerically according to the following scale:

Strongly agree	5	Neutral	3	Disagree	2
Agree	4			Strongly Disagree	1

Subjects who heard climax order were paired with subjects who heard anti-climax order on initial attitude and college grade average. In addition, the average age and average college classification of each audience was computed. Table IV reveals the similarity of the two audiences in respect to controlled characteristics.

Table IV

Characteristics of the Two Audiences in Study # 1

Variable	Audience Hearing Anti-Climax Order	Audience Hearing Climax Order
College Grade Average	Paired	
Initial Attitude	Paired	
Number of Women	29	29
Number of Men	38	38
Average Age	20.46	20.16
Average College Classification	2.01	1.93

The subjects heard the speeches in groups ranging from twenty-five to one-hundred. No subject heard more than one speech. Subjects were told they were taking part in a listening project, that they were not to take notes, that their listening scores would not affect their grades, and that listening scores would be returned to them during the following week. After hearing the speech, the subjects filled out a sixty item true-false test based on the material in the speech, again indicated their attitude on the two propositions using the five point numerical scale and rated the speech for convincingness on a nine point scale.

Study # 2 was completed during the spring of 1953 and followed essentially the same design employed in study #1 except that only one speech was used (Vote Speech), the pre-attitude testing and preliminary questionnaire were filled out just before the subjects hear the speech rather than a week in advance, and the testing covered a two week period rather than being completed in one day.

Subjects used were students enrolled in the Communications 1-2-3 sequence at the University of Minnesota (St. Paul Campus). Thirty nine subjects, paired on initial attitude and college grade average made up each audience. In addition, the average age and average college classification of each audience were computed (Table V).

Table V

Characteristics of the Two Audiences in Study #2

Variable	Audience Hearing Anti-Climax Order	Audience Hearing Climax Order
College Grade Average	Paired	
Initial Attitude	Paired	
Number of Women	18	18
Number of Men	21	21
Average Age	19.03	19.46
Average College Classification	1.08	1.03

After hearing the speech, subjects were asked to complete the sixty item true-false test, to indicate their attitude on the vote proposition again, and to rate the speech for convincingness. No control group was used in study #2 because both the pre and post attitude testing were completed during the same hour.

RESULTS

Table VI gives the results of the pre to post attitude shift for both forms of presentation. In both studies, both forms of presentation resulted in a significant shift of attitude. The control group in study #1 did not shift significantly.

Table VI

Attitude Shift on the Main Proposition

Audience	N	Mean Attitude Pre-test	Mean Attitude Post-Test	Diff.	t
Anti-Climax Audience (Study #1)	67	3.33	3.58	.25	2.43**
Climax Audience (Study #1)	67	3.33	3.63	.30	2.52**
Control Group (Study #1)	134	3.04	2.94	-.10	1.54
Anti-Climax Audience (Study #2)	39	3.74	3.97	.23	2.47**
Climax Audience (Study #2)	39	3.74	4.26	.52	4.77**

** Significant at the 1% level

Table VII gives the results for the comparative effectiveness of the two forms of presentation on main proposition, large argument, medium argument, and small argument attitude shift. The only significant difference occurs in study #2 in favor of climax presentation in securing attitude shift on the main proposition.

Table VIII gives the results for the comparative effectiveness of the two forms in respect to retention. The only significant difference appears in study #1 where the anti-climax order showed better retention of the small argument.

Table IX gives the results for the comparative effectiveness of the two forms of presentation on convincingness ratings. No significant differences appear in either study.

Table VII

Comparative Effectiveness of Climax and Anti-Climax Order on Attitude Shift

Audience		N	Mean Attitude Shift	Difference	t
Main Proposition					
Anti-Climax Audience	(Study #1)	67	.25	.05	.34
Climax Audience	(Study #1)	67	.30		
Anti-Climax Audience	(Study #2)	39	.23	.29	2.19*
Climax Audience	(Study #2)	39	.52		
Large Argument					
Anti-Climax Audience	(Study #1)	67	.48	.11	.53
Climax Audience	(Study #1)	67	.37		
Anti-Climax Audience	(Study #2)	39	.26	.10	.72
Climax Audience	(Study #2)	39	.36		
Medium Argument					
Anti-Climax Audience	(Study #1)	67	.63	.17	.90
Climax Audience	(Study #1)	67	.46		
Anti-Climax Audience	(Study #2)	39	.61	.11	.66
Climax Audience	(Study #2)	39	.72		
Small Argument					
Anti-Climax Audience	(Study #1)	67	.91	.00	.00
Climax Audience	(Study #1)	67	.91		
Anti-Climax Audience	(Study #2)	39	1.18	.00	.00
Climax Audience	(Study #2)	39	1.18		

* Significant at the 5% level.

Table VIII

Comparative Effectiveness of Climax and Anti-Climax Order on Retention

Audience		N	Mean Retention Score	Difference	t
Total Retention					
Anti-Climax Audience	(Study #1)	67	50.83	.70	1.32
Climax Audience	(Study #1)	67	50.13		
Anti-Climax Audience	(Study #2)	39	45.79	.18	.21
Climax Audience	(Study #2)	39	45.97		
Large Argument					
Anti-Climax Audience	(Study #1)	67	25.22	.14	.33
Climax Audience	(Study #1)	67	25.08		
Anti-Climax Audience	(Study #2)	39	22.64	.10	.16
Climax Audience	(Study #2)	39	22.54		
Medium Argument					
Anti-Climax Audience	(Study #1)	67	17.09	.05	.17
Climax Audience	(Study #1)	67	17.04		
Anti-Climax Audience	(Study #2)	39	15.82	.64	1.75
Climax Audience	(Study #2)	39	16.46		
Small Argument					
Anti-Climax Audience	(Study #1)	67	8.52	.52	2.66**
Climax Audience	(Study #1)	67	8.00		
Anti-Climax Audience	(Study #2)	39	7.33	.36	1.49
Climax Audience	(Study #2)	39	6.97		

** Significant at the 1% level.

Table IX

Comparative Effectiveness of Climax and Anti-Climax Order on Convincingness Ratings

Audience	N	Mean Convincingness Rating	Difference	t
Anti-Climax Audience (Study #1)	67	5.49	.06	.21
Climax Audience (Study #1)	67	5.43		
Anti-Climax Audience (Study #2)	39	6.26	.29	.81
Climax Audience (Study #2)	39	5.97		

Conclusions and Interpretation

Table X is a summary of results of Sponberg's study and the two studies reported here.

Table X

Comparative Results from Three Studies measuring the Relative Effectivensss of Climax and Anti-Climax Order

	SPONBERG Speech: Marriage N = 93			Study #1 Speech: Marriage Vote N = 67			Study #2 Speech: Vote N = 39		
ATTITUDE SHIFT:	Diff.	Favors	Sig.	Diff.	Favors	Sig.	Diff.	Favors	Sig.
Main Proposition	.05	Climax	No	.05	Climax	No	.29	Climax	5%
Large Argument	.61	Anti-Cl	1%	.11	Anti-Cl	No	.10	Climax	No
Medium Argument	.07	Climax	No	.17	Anti-Cl	No	.11	Climax	No
Small Argument	.06	Anti-Cl	No	.00	Even	No	.00	Even	No
RETENTION:									
Large Argument	.89	Anti-Cl	1%	.14	Anti-Cl	No	.10	Anti-Cl	No
Medium Argument	.13	Anti-Cl	No	.05	Anti-Cl	No	.64	Climax	No
Small Argument	.25	Anti-Cl	1%	.52	Anti-Cl	1%	.36	Anti-Cl	No
Total	1.24	Anti-Cl	1%	.70	Anti-Cl	No	.18	Climax	No
CONVINCINGNESS:	.06	Anti-Cl	No	.06	Anti-Cl	No	.29	Anti-Cl	No

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So far as statistically significant differences are concerned, Studies #1 and #2 give little support to Sponberg's outcomes. There are only two statistically significant differences and one of them favors climax order.

However, the outcomes should also be examined for consistency of trends. With regard to shift of opinion, Sponberg's outcomes showed no impressive superiority for either form of presentation, nor do Studies #1 and #2. In regard to retention there are twelve comparisons of the two forms of presentation in the three studies combined and ten of these favor anti-climax order. In regard to ratings for convincingness anti-climax order was favored by all three studies.

These suggest the possibility of superiority of anti-climax order over climax order in respect to retention and convincingness, but the demonstration is not satisfactory owing to the absence of statistical significance. The question can be resolved only by carrying out additional experimental comparisons.