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The Relationship of Group Membership to Third Person Effects about Environmental Issues

Introduction

The study explores the dynamics of those who join environmental movements. According to Wilson (1973) people join voluntary organizations because of incentives offered (material incentives, soldiery incentives, purposive incentives). Gruing's (1989) study of Sierra club members revealed strong support for purposive incentives as the main reason. Many researchers found that people join environmental groups because of perceived threats to aesthetic and preservationist concerns not specifically interested in environmental issues (Gunater & Finlay, 1989, Grunig, 1989). Membership is also voluntary, members of environmental groups are usually recruited by direct mail or by proselytizing (Milbrath, 1984). Csikszentmihalyi (1991) showed that people pay more attention to those who possess certain traits and there- fore are more apt to rely on others when interpreting the media.

Information and opinion about the environment has been carried by the major mass media (Atwater, Salwen, & Anderson 1989). Though interpersonal sources for environmental news were also used (Sellers & Jones, 1973), different studies conducted by Murch (1971), Tyler & Cook (1984), Davidson (1983), Perlof (1989), and Perlof, Nevendorf, Giles, & Jefres (1992) suggested that media impact is strongest at societal level but not on personal level. Studies concerning controversial international level issues suggest that members tend to perceive their reference groups as experts on the subjects that matter to them (Price, 1989). Chau (1994) examined the respondents' perception of media

influence on environmental issues. The study revealed that environmental group members did not differ from non-members in their perception of media influence on themselves and others, though the group members perceived themselves highly knowledgeable about pollution issues. It was further explained that proportionally more people who perceived themselves to be highly knowledgeable about pollution issues exhibited the first-person effect phenomenon from newspapers and radio but not from television. In one study Davison (1983) hypothesized that a person confronted with a media message would perceive it to exert greater influence on most other people but not on himself or herself. This impersonal impact leads to hypothesize that most people perceive the media to exert a greater influence on most "other" peoples but not on 'me' or 'you', which is called 'third-person' effect (Culbertson & Stempel 1985). Though media effects are very important components of the development of public opinion, less attention seem to be paid to study them (Atwood, 1993).

Researchers have generally found those unobtrusive issues such as environmental problems tending to display greater media effects particularly in agenda setting (Behr & Iyenger 1985, Zucker 1978). When people have less direct experience in an issue they are more prone to rely on the news media for information and interpretation of those issues. One study suggested that different media type exert different effects (Ostman & Parker 1987). The study found that people who use newspapers as a source for environmental information subsequently become more attentive, aware and concerned. While, television emerged as a poor predictor of these variables.

The Spiral of Silence theory's basic concepts are public opinion, personal opinion and mass media. The mass media help forge and maintain a society's public opinion. Spiral of Silence theory's structural concept is the down ward spiral of public opinion that moots majority personal opinion and, with the help of mass media produces more and more conformity to the majority public opinion. In other words, each of us is constantly testing public opinion against our personal opinion. If we find that our personal opinion goes against public opinion, we remain silent. With more media support of majority public opinion, we desire conformity and join in the expression of majority view. Of course, we know public opinion through what we hear, see, and read in the mass

media and in talking with other people (Cragan & Shield, 1998)

This paper examines such an influence based on public opinion study in Illinois on four environmental issues i.e. pollution in lakes and rivers, air pollution from burning wood and coal, chemical and other toxic waste, and shortage of good and clean water. Illinois ranked second on the national list for the amount of chemicals discharged into the public sewage treatment system, fourth for releasing toxic chemicals and fifth for the total amount of toxic waste. Moreover waste disposal has become a critical problem (The US Environment Protection Agency, 1990). The local media and environmental activist seem visibly active in playing their role. Therefore, this study is an attempt to examine how group membership is related to the third-person effect in the perception of the opinion climate and how accurately the group members perceive the opinion climate compared to non-members. It is plausible that members are more likely than non-members to under estimate media effects on themselves because of greater perceived knowledge. Given this reasoning it is hypothesized that proportionally more environmental group members than non-members will exhibit higher perceived knowledge about pollution problems. The study tested that proportionally more people with high-perceived knowledge about pollution problems will exhibit third-person effects regarding information from newspapers, television and radio. Therefore, proportionally more environmental group members than non-members will exhibit third-person effects regarding information from newspapers, television and radio. The study further tested the relationship between perceived knowledge of pollution issues and perceived media effects.

Method

The study measured the extent of third-person effects and communication behaviours among members of environmental groups and non-members based on a public opinion survey about four environmental issues. The survey was carried out in Carbondale (Southern Illinois University). Data were collected from 210 SIU graduate and undergraduate students of mass communication at Carbondale. Survey questionnaires were administered during fall and winter terms in 1995.

Research Questions

The following four questions from the research instrument of Chau (1994) were used in the present study.

Environmental group membership was determined by asking the following question:

Q.1. Do you belong to any environmental organization?

And perceived knowledge about pollution problems was determined by asking:

Q.2. How well informed would you say you are about pollution problems in Southern Illinois?
(a). Well-Informed (b). Somewhat Informed
(c). Not Well Informed.

Those who were "somewhat informed" and "not well informed" were merged into one category of "Low Perceived Knowledge". Those "Well Informed" were categorized as having "High Perceived Knowledge".

The third-person effect was measured for each of the three media types by the following questions:

Q.3. Do you think the news about pollution has had any effect on how serious YOU think pollution problems are in Southern Illinois?
(a). A big effect (b). Some effect (c). No effect at all.

Q.4. Do you think the pollution has had any effect on how important MOST PEOPLE think pollution problems are?
(a). A big effect (b). Some effect. (c). No effect at all.

First person and third person effect was measured by combining the responses of Q.3 and Q.4. Those who said that media has some or no effect (response category of b & c of Q.3) on them but has big effect on others (category a of Q.3) illustrated the third person effect of each medium.

Individuals who think that media has "some or big effect" (Q.3-a & b) regarding pollution problems on them but "some effect" on others (Q.4-b) exhibited first person effect. Individuals who perceived similar media effects on others and themselves were treated as other effects for the purpose of analysis of second hypothesis. Communication behavior of members of environmental organizations and non-members on

pollution issues was measured by asking:

Q.5. Have you talked to any one (family member, friends or co-workers) about pollution problems?
(a). Talked a lot (b). A little (c). Not at all.

Responses of " talked a lot " were categorized as "High discussion", whereas "talked a little" were considered "Low discussion" for the purpose of the analysis of last hypothesis.

All hypotheses were tested by cross tabulation for each medium.

Findings

A total of 210 questionnaires were completed in Southern Illinois. There were 118 (56%) female respondents and 92 (44%) male respondents; 7 cases were missing of the gender.

Relevant to this study is environmental group membership. Table I shows the number and proportion of respondents who belong to such groups. A total of 30 (14.2 percent) respondents indicated that they belong to some kind of environmental organizations, whereas 180 (87 percent) respondents did not.

TABLE 1. Number and Proportion of Members of Environmental Groups

Environmental Group Membership	n	Percent
Yes	30	14.28
No	180	85.71
Total	210	99.9

It was hypothesized that proportionally more environmental group members than non-members will exhibit higher perceived knowledge of pollution problems. Table 2 shows the relationship between group membership and perceived knowledge of pollution issues. Of the 180 only 16.1

percent (n=29) perceived themselves well informed about environmental problems, whereas 46.66 percent (n=14) of the 30 environmental group members perceived themselves to be well informed. This difference was significant (chi-square = 17.74, df =1, p< 0.0001) therefore the hypothesis 1 is supported.

TABLE 2. Relationship between Environmental Group Membership And Perceived Knowledge of Pollution Problems

Environmental Group Membership		*Perceived Knowledge of Pollution Problems* High	Low	Total
Members	(n)	14	16	30
	(%)	46.66	53.33	14.28
Non-members	(n)	29	151	180
	(%)	16.11	83.88	85.7

Chi square = 17.74, df =1, p< 0.0001

It was further hypothesized that proportionally more people with perceived knowledge about pollution problems will exhibit third-person effect regarding information from newspaper, television, and radio. Table 3 illustrates the association between perceived media effects on others and self. Of the 43 respondents who perceived high knowledge about pollution problems, 18.6 percent (n=8) exhibited third-person effects with regard to information from newspapers. Whereas, out of 167 respondents who perceived low knowledge about pollution issues 19.76 percent (n=33) showed third- person effects for the information about environmental issues from newspapers. The difference between two groups is not significant (chi-square=.029, df=1, p>.05).

TABLE 3. Relationship between Perceived Knowledge of Pollution Problem And Perceived Media Effect on Others and Self

		Perceived Media Effects on Others & Self		
Perceived Knowledge of Pollution Problem		Other Effects	3rd Person Effect	Total
a. Newspaper				
High Knowledge	(n)	35	8	43
	(%)	81.39	18.60	20.47
Low Knowledge	(n)	134	33	167
	(%)	80.29	19.76	79.52
Total	(n)	169	41	210
	(%)	80.47	19.52	100
b. Television				
High Knowledge	(n)	33	10	43
	(%)	76.7	23.25	20.47
Low Knowledge	(n)	136	31	167
	(%)	81.43	18.56	79.52
Total	(n)	169	41	210
	(%)	80.47	19.52	100
c. Radio				
High Knowledge	(n)	32	11	43
	(%)	74.41	25.58	20.47
Low Knowledge	(n)	137	30	167
	(%)	82.03	17.96	79.52
Total	(n)	169	41	210
	(%)	80.47	19.52	100

a. newspaper: Chi-square= 0.029, df1, p> 0.05
b. Television: Chi-square= 0.479, df1, p>0.05
c. Radio: Chi-square= 1.053, df1, p> 0.05

In the case of television, 23.25 percent (n=10) of the 43 respondents who perceived high knowledge about environmental issues exhibited third-person effects. By comparison, 18.56 percent (n=31) of the 167 respondents with low perceived knowledge showed such effects. The difference between these groups is not significant (chi-square=0.479, df=1, p>.05).

Concerning radio information about environment news, it was found that 25.58 percent (n=11) of 43 respondents with perceived high knowledge about environmental issues exhibited third person effect. And of the 167 respondents with

low perceived knowledge 17.9 percent (n=30) displayed such effects like the previous difference it is not significant (chi-square= 1.05, df=1, p=0.05).

Further analysis was carried out on the types of perceived media effects between the two groups. Table 4 shows that only more than one-third of respondents perceived the media to exert similar effects on themselves to have high knowledge about pollution issues had greater media effects on themselves and others. This was significant for all three media i.e., newspapers (chi-square=15.03, p=.001), television (chi-square=12.85. p=.002) and radio (chi-square=6.38, p=.04). Thus the hypothesis is supported.

TABLE 4. Relationship between Perceived Knowledge of Pollution Problem and Perceived Media Effect

Issues Perceived Knowledge of Pollution		*Perceived Media Effects* Ist Person	Similar	3rdPerson	Total
a. Newspaper					
High Knowledge	(n)	23	12	8	43
	(%)	53.5	27.9	18.6	20.5
Low Knowledge	(n)	41	95	31	167
	(%)	24.6	56.9	18.3	79.52
Total	(n)	64	107	39	210
	(%)	30.5	51.0	18.6	100
b. Television					
High Knowledge	(n)	21	12	10	43
	(%)	48.8	27.9	23.3	20.5
Low Knowledge	(n)	41	95	31	167
	(%)	24.6	56.9	18.3	79.52
Total	(n)	62	107	41	210
	(%)	29.5	51.0	19.5	100
c. Radio					
High Knowledge	(n)	16	16	11	43
	(%)	37.2	37.2	25.6	
Low Knowledge	(n)	42	98	27	167
	(%)	25.1	58.7	16.12	
Total	(n)	58	114	38	210
	(%)	27.6	54.3	18.1	100

a. Newspaper: Chi-square = 15.03, df1, p=0.001
b. Television: Chi-square = 12.85, df1, p=0.002
c. Radio: Chi-square = 6.38, df1, p=0.04

In the case of hypothesis that more environmental group members than non-members will exhibit third-person effect regarding information from newspapers, television, and radio, Table 5 shows the relationship between environmental group membership and perceived media effects on other and oneself. Up to 23.3 percent (n=7) exhibited third person effects regarding environmental information from newspapers. Of the 180 non-members, 24.8 percent (n=45) exhibited such effects. The difference between these groups is not significant (chi-square=.038, p>.05). Regarding information from radio and television, the differences are also not significant. The chi-square value for television is .062, p>,05 and radio is .475 p>.05. Thus the hypothesis is not supported.

TABLE 5 Relationship between Environmental Group Memberships and Perceived Effects on Other and Self

		Media Effects		
Environmental Group membership		Other Effects	3rd Person Effect	Total
a. Newspaper				
Members	(n)	23.	7	30
	(%)	76.7	23.3	14.3
Non-members	(n)	135.	45	180
	(%)	75.	24.8	85.7
Total	(n)	158.	52	210
	(%)	75.2	24.8	100
b. Television				
Members	(n)	22	8	30
	(%)	73.3	26.7	14.3
Non-members	(n)	128	52	180
	(%)	71.1	28.9	85.7
Total	n)	150	60	210
	(%)	71.4	28.6	100
c. Radio				
Members	(n)	20	10	30
	(%)	66.7	33.3	14.3
Non-members	(n)	131	49	180
	(%)	72.8	27.2	85.7
Total	(n)	151	59	210
	(%)	71.9	28.1	100

a. Newspaper: Chi-square = .038, df 1, p= .84
b. Television: Chi-square = .062, df 1, p= .80
c. Radio Chi-square = .475, df 1, p= .49

Table 6 illustrates a more detailed relationship between environmental group members and perceived media effects on others and self. It shows that 47.67 percent (n=14) of the environmental group members and 57.77 percent (n=104) non-members perceived similar media effects on themselves and others. But group membership made no difference in the way respondents perceived media effects on others and themselves. This is true for newspapers (chi-square=2.79, p>.05) and radio (chi-square=.49, p>.05), but not for television (chi-square=6.71, p>.05). Thus the hypothesis is partially supported.

TABLE 6. Relationship between Environmental Group Memberships and Perceived Media Effects on Other and Self

		Media Effects			
Environmental Group membership		Ist Person	Similar	3rd Person	Total
a. Newspaper					
Members	(n)	9	14	7	30
	(%)	30.0	47.67	23.23	14.28
Non-members	(n)	31	104	45	180
	(%)	17.22	57.77	25.0	85.71
Total	(n)	40	118	52	210
	(%)	19.04	56.19	24.76	100
b. Television					
Members	(n)	10	12	8	30
	(%)	33.33	40.0	26.66	14.28
Non-members	(n)	26	102	52	180
	(%)	14.44	56.66	28.97	85.71
Total	(n)	36	114	60	210
	(%)	17.14	54.28	28.60	100
b. Radio					
Members	(n)	8	12	10	30
	(%)	26.66	40.0	33.33	14.28
Non-members	(n)	50	81	49	180
	(%)	27.77	45.0	27.22	85.71
Total	(n)	58	93	59	21
	(%)	27.62	44.28	28.09	100

a. Newspaper: Chi-square= 2.79, df 1, p>= . 05
b. Television: Chi-square= 6.71, df 1, p>= . 05
c. Radio: Chi-square= 0.49, df 1, p>= . 05

It was predicted that proportionally more members than non-members will discuss pollution issues with family, friends and co-workers. The relationship between group membership and interpersonal communication behavior is depicted in table 7. Out of the 30 environmental group members, 66.7 percent (n=30) said they talk a lot about pollution problems with their family whereas 47.1 percent non-members did the same (chi-square=5.35, p=.21), 60 percent (n=18) environmental group members said they discuss environmental issues with their friends and co-workers, whereas 38.9 percent (n=70) non-members discuss such issues (chi-square=4.70, p=.03). Thus the hypothesis is supported.

TABLE 7 Relationship between Environmental Group Memberships and Frequency of Interpersonal Communication

		Frequency of Interpersonal Communication		
Environmental Group Membership		High	Low	Total
a. Family				
Members	(n)	20	10	30
	(%)	66.7	33.3	14.3
Non-members	(n)	79	101	180
	(%)	47.1	52.9	57.7
Total	(n)	99	111	210
	(%)	47.1	52.9	100
b. Friend				
Members	(n)	18	12	30
	(%)	60.0	4.0	14.3
Non-members	(n)	70	110	180
	(%)	38.9	61.1	85.7
Total	(n)	88	122	210
	(%)	4.9	58.1	100

a. Family Chi-square = 5.35, df 1, p= .021
b. Friends Chi-square = 4.70, df 1, p= .03

Discussion

The findings of this study show no difference in the perception of media effects between members of environmental groups and non-members. The study shows that members of environmental groups were no more likely to display the third-person effects phenomenon than non-members. About 24.8 percent , 28.6 percent, and 28.1 percent of the respondents (tables 3-5) in both groups exhibited third-person effects regarding information from newspapers, television, and radio, respectively. Like Chua's (1994) study none of the hypothesis concerning the group membership and third-person effects was supported. Proportionally more group members perceived themselves to be knowledgeable about pollution issues. Individuals who perceived themselves more knowledgeable about pollution issues exhibited first person effects with regards to information from newspapers, television, and radio (table 5). Further analysis revealed promising results, first-person effects was exhibited by the members of environmental groups regarding the information from television (table 6). Furthermore, it is notable that individuals who perceived greater knowledge about pollution issues exhibited first-person effects (table 4). It shows the effectiveness and persuasiveness of the message from media.

Another significant factor which emerged from this study was interpersonal communication. The environmental group members were more likely to talk about the pollution issues with their family, friends and co-workers. It supports the stance that how important environmental issues are for the members of an environmental organization. Such action could be helpful in resolving the environmental problems.

Authors

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