

A behavioral and phenomenological analysis of audience reactions to comic performance

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Abstract

Twelve groups, of from 4 to 6 students each, listened to comic tapes performed by Bill Cosby and Richard Pryor: six of these groups were composed of people who were acquainted with one another and six were composed of strangers; one third of both the acquaintance and stranger groups were composed of all male subjects, one-third of all female subjects, and one-third of both male and female subjects. Six of the groups heard tapes in the order Cosby-Pryor; the remainder heard them in the order Pryor-Cosby. All group members were asked for four different self-reports concerning what they were aware of while listening to the tapes. They also were rated by independent observers on whether or not they were attentive (or non-attentive) to the tapes as well as for the occurrence of 11 specific behaviors including laughing and smiling. Results revealed strong effects for all four variables (comedian, gender, order, and acquaintanceship) on most behavioral and self-report measures, although only under certain conditions was there a high degree of concordance between on and off-target behavioral ratings and self-reports. Results were discussed in terms of the need for a field theory of audience reactions — both phenomenological and behavioral — to comic materials. In this type of theory, the field is defined not only by the behavioral, social, and personal-historical conditions comprising the present situation but also by experiences associated with the specific bodily reactions of laughing and smiling.

A good deal of the empirical literature dealing with humor has involved the study of jokes in the context of the psychological laboratory. This is true whether the primary focus has concerned the nature of cognitive processes involved in understanding humor (Suls 1983), the developmen-

tal trajectory of simple comprehension (McGhee 1979), the social and personal attitudes expressed by a joke (Lafave 1972; Zillman 1983), the defensive/expressive aspects of tendentious humor (Zwerling 1955), and/or the physiological substrate of joke appreciation (Godkewitsch 1976). This state of affairs seems a bit odd, since a good deal of humor and joking, not to mention other antecedents of laughing and smiling, seem to depend, even in the case of formal jokes, on the nature of the social setting in which the joke or humorous comment took place. Indeed, the standard explanation for a funny remark that evoked laughter in one situation but failed to evoke it in a second situation is: "Well, you had to be there ..."

One locale in which social and joke factors cannot be separated concerns the situation of standup comedy. More than any other stage performance, standup comedy requires the performing artist to take account of his or her audience. Not only do audience members pay attention to the comedian and laugh, smile, and applaud — as they do in response to other performers — they frequently interact (that is, "heckle") and are interacted with (that is, "put-down") by the comedian. Audience laughter, or the lack of it, frequently serves to direct the comedian to remarks that either are critical of himself or, more likely, of the audience as well as to new topics likely to produce laughter.

In addition to performer-audience interactions of this type, members of a comic audience interact with one another, either by talking or by other non-verbal gestures, communicating reactions as diverse as: "Did you get it?," "Isn't that weird?," "Did she really say that?," and so on. Taking all of these factors into account suggests that the way in which an individual audience member responds to comic performance depends at least as much upon a complex pattern of personal and social factors present in the audience situation as upon the comedian and/or comic material itself.

The anthropological literature also supports the view that complex socio-cultural patterns must be taken into account in contextualizing humorous events. This situation seems to apply whether such humor concerns spontaneous remarks made by longshoremen on the west coast of the United States (Pilcher 1972), physicians at case presentations in Boston (Coser 1960), revelers at a Mardi Gras celebration in New Orleans and elsewhere, clerical or factory workers in the U.K. (Bradney 1957; Sykes 1966), and even !Kung tribesmen eating Christmas dinner with an anthropologist in the Kalahari Desert (Lee 1969). To the outside observer

with little knowledge of the mores and history of the specific groups under consideration, many of the events described seem incomprehensible at best and somewhat sadistic at worst.

Of greater significance to the present study, however, are anthropological and historical reports of ritual humor performed by comic priests; for example, the Koyemci clowns of the Zuni nation in the U.S. (Charles 1945; Crumrine 1969; Makarius 1970), Catholic priests and high ranking laity at the Feast of Fools in Medieval Europe (Welsford 1935; Cox 1969), and the Imigi subgroup of the Kiwai tribe in Papua New Guinea (Charles 1945). In each of these cases obscene and/or scatological actions are performed before the entire community by functionaries who ordinarily serve in sacred or other leadership roles and the response is usually one of laughter rather than one of shock or surprise.

The first laboratory study to document the effects of comparably complex situational patterns surrounding audience reactions to comedy concerned groups of students listening to comic performance by Bill Cosby and Don Rickles (Murphy and Pollio 1975). Results of this early study indicated little difference in audience reaction when these comedians were listened to in a group of friends. There were great differences, however, when Cosby and Rickles were listened to in an audience of strangers. Under these conditions, audience members scarcely laughed (or even moved) in response to Rickles; they did, however, laugh, smile and move in typical ways to Cosby. Post-performance judgments by audience members revealed no differential preference for Cosby or Rickles under friends audience conditions; there were marked differences, however, in favor of Cosby for audiences composed of strangers.

Additional empirical support demonstrating the powerful effect social factors exert on laughing and smiling in audience situations is provided in a series of studies by Chapman and Foot (1976; Chapman 1975, 1983; Foot and Chapman 1976) in which children listened to (or viewed) humorous records (or films) under a number of different conditions: alone; in the presence of children of the same/different gender; in the presence of older/younger children; in the presence of one or more adults; and so on. Results were clear in indicating strong cohort effects (more laughter and smiling in the presence of other children), some gender effects (girls laughed and smiled more in the presence of boys but not vice-versa), and mixed age effects (some adults increased laughing and smiling, others decreased it). Based on these, and other, results, Chapman and Foot reached much the same conclusion as Murphy and Pollio

(1975): reactions to humorous materials depend at least as much on the social contexts in which they are encountered as on the specific nature of the comic material itself.

Although both sets of studies agree in their analysis of the data at a descriptive level, Murphy and Pollio (1975) addressed the issue of the way(s) in which contrasting comic performances were experienced in the specific social contexts of friends and strangers. This analysis revolved around an evaluation of the comic worlds created by Cosby and Rickles. Differences between the two comedians are striking: Cosby creates a world of the nice guy, ruminating about the misadventures of childhood and the perpetual battles a kid has with his archenemies: adults and school. Rickles perpetuates a world of hostility in which failure, incompetence, and inferiority are focal points. The scapegoat often is some audience member whose verbal skills are less than those of Rickles, and laughter usually comes at someone's expense.

Rickles and Cosby were conceptualized as defining two different comic styles: one that uses hostile and/or taboo material to focus the individual audience member on the here-and-now of his or her experience, and a second that uses a more narrative style to encourage the individual audience member to envision an imaginary world in which sensibly non-sensical events occur. For Cosby, a situation or context other than the present one is created and made crucial; and little effect of audience composition is to be expected. For Rickles, the individual audience member is made self-conscious and situation-centered, and great differences are to be expected in the responsiveness of friend and stranger audiences.

A specific evaluation of this analysis was left for future research since there seemed, at the time, no rigorous, on-line, way in which to evaluate "subjective" experiences of audience members. Since 1975, however, a number of techniques have been developed to assess stream of consciousness experiences (Pope and Singer 1978). Hurlbert, Leech, and Saltman (1984), in discussing these procedures, note that they may be divided into those that are retrospective and those that are relatively contemporaneous with the present experience. Included among the latter are procedures such as thinking out loud (Klinger 1978; Ericsson and Simon 1980), event recording (Pope 1978) and thought-sampling (Hurlbert 1979, 1980; Pollio 1984).

Within the context of comic performance, thought-sampling procedures seem to be more useful than retrospective procedures since they

offer an on-going assessment of personal experience in the situation. To be sure, this procedure does not guarantee access to the subject's stream of consciousness in the same way as it is experienced by the participant. Despite this, self-reports do seem to provide limited access to the first-person world of the participant, particularly if he or she is told there are no right or wrong ways to respond, and that anything reported will be of interest to the researcher. While everyone who does research on stream of consciousness research will agree with William James's (1890) classic assertion that we are only aware of some segment of the stream of consciousness after it has flowed by, such a state of affairs should not stop researchers from collecting self-report data, especially if they, and we, are clear that such reports are not to be construed as identical with the experience as lived by the person.

With this caveat in mind, the present study was designed to evaluate the experience of individual audience members listening to comic records on the basis of a thought-sampling procedure. Individual participants also were evaluated on the basis of a series of behavioral ratings similar to those used by Murphy and Pollio (1975). The major purpose of this study was to determine what audience members do *and* are aware of when listening to comedians who either do or do not make the present situation of crucial importance by targeting individual audience members, talking about taboo topics, or some combination of the two. Within the present context, Richard Pryor was chosen to represent a situation-centered comedian and Bill Cosby was chosen to represent a non-situation-centered comedian.

Method

Participants

Participants were secured on either a volunteer basis or for course credit; all were undergraduate students in introductory psychology classes. A total of 57 individuals was used: 29 who listened to the comedians in the order Cosby-Pryor and 28 who listened in the order Pryor-Cosby. These categories were further subdivided into friends and strangers groups. To satisfy the friends category, all participants were asked to attend the research session with people they know prior to the experiment, and to tell the experimenter exactly how "they know one another." There were

14 friends and 15 strangers who listened to tapes in the Cosby-Pryor order; there were 13 friends and 15 strangers who listened in the Pryor-Cosby order.

Setting and apparatus

The room in which participants listened to tapes was designed to provide a reasonably comfortable and relaxing setting. Six chairs formed an ellipse thereby permitting all subjects to face one another. One centrally located microphone was suspended from the ceiling to pick up the laughter and speech of audience members. Two video cameras were mounted in the room such that each camera focused on three of the chairs. Situated at the opening of the ellipse were two audio speakers presenting the comic tape.

A videotape recorder, television monitor, and audiotape player were located in an adjacent room. The audiotape player presented 29 minutes of comic material piped into the experimental room. From their tapes *Bill Cosby's Greatest Hits* and *Richard Pryor's Greatest Hits*, respectively, a 13-minute segment of Cosby and a 16-minute segment of Pryor were selected. The Cosby routines included: "Driving in San Francisco," "The Apple," "Babies," "The Waterbottle," "Street Football," and a segment of "Buck, Buck." The Pryor routines included: "Cocaine," "When Your Woman Leaves You," and "Mudbone." All tapes were continuous, with four interruptions. These interruptions occurred approximately at the 3, 6, 10, and 13 minute mark for Cosby and at the 4, 9, 12, and 16 minute mark for Pryor. Audio, rather than video, tapes were used in the hope that subjects would be more active in imagining events described by the comedians.

Procedure

Groups of subjects (4–6 per group) were asked to come to a waiting area outside of the audience listening room. When each group — friends or strangers — had assembled, participants were led into the listening room and allowed to sit anywhere they chose. Each group was told that this was to be an experiment dealing with humor and that they would be videotaped. All participants were read the following instructions:

In this experiment I am interested in learning about the various reactions people have to different types of comedians. You will be listening to tapes presenting a performance of two different comedians, Richard Pryor and Bill Cosby. What I want you to do during this experiment is to give me your reactions, or thoughts, about the tape or about anything else you might be experiencing as you listen to Cosby and Pryor. At random times I will stop the tape and ask you to write down your experiences on this piece of paper. For purposes of the experiment, I would like you to write anything you were aware of just before the tape was stopped. Since I am interested in your own, quite individual, experiences try to write down whatever it was you were aware of just before the tape was interrupted. If you were not aware of anything during that interval, feel free to write down "nothing," or some similar phrase.

There obviously are no "right" or "wrong" answers ... These performances contain material that may be offensive to some people. If at any time you feel uncomfortable, please feel free to leave ... Your names will not be used, and the only people shown these recordings will be the experimenters ... Remember, anything you were aware of before the interruption is perfectly alright, so please try to write it down as clearly as possible. Do you have any questions?

All subjects were given packets consisting of a self-report form and a questionnaire, with the self-report form presented first. On the self-report form, the following instructions were printed: "The tape will be interrupted at pre-selected time intervals. When the signal is given, write down *exactly* what you were aware of just before the interruption occurred. Write this in the corresponding time interval blank." Following these instructions were four blank lines, each corresponding to one of the four interruptions.

Each interruption began with the reading of the following instructions: "This is time interval N; please write down exactly what you were aware of just before the interruption occurred." When an observer in the control room saw that all participants had finished writing, the comedy routine was started again. The time interval taken for writing a self-report was approximately 2 to 3 minutes. Following each comedian, all subjects filled out a questionnaire which inquired about previous exposure to Cosby and Pryor tapes as well as about their attitudes toward these specific comic routines.

A total of 12 groups of participants was tested. Six groups were presented comic routines in the order, Cosby, then Pryor. The other six groups were presented comedians in the order Pryor, then Cosby. Both sets of six groups consisted of 3 Friends groups and 3 Strangers groups. For both friends and strangers conditions, two groups contained only males, two, only females and two, both male and female participants.

Behavior rating categories and procedures

Before it was possible to examine the effects of audience composition on reactions to humor, it was necessary to develop behavior rating categories. The final set of categories consisted of two types: one to code an overall judgement of the individual's current attentional state, on or off target, and a second to code the occurrence of 11 specific behaviors. These behaviors included the humor-related responses of laughing and smiling as well as the following more general behaviors: lowering the head; turning the head; putting one's hand to one's head, face, trunk, hand or arm; looking around; talking; and sitting still without moving. Each state and behavior category was scored during a 30-second sampling interval.

For each individual 21 different, 30-second, intervals were assessed. These were located around each of the 4 self-report interruptions such that the 90-second interval preceding and following each interruption was scored, except for the fourth interruption, where only the 90-second period preceding the interval was scored since the performance ended with that interruption. All state and event ratings, for all intervals and participants, were done by two independent observers viewing video tapes of the various groups. Prior to the actual recording of data, both raters, who were senior undergraduate psychology majors, were trained to reach at least an 80% agreement level with the senior investigators and with each other on practice tapes of behavioral categories produced by audience members not used in this study. A behavioral category was coded as having occurred during a specific 30-second interval only when both raters scored it on the basis of independent observation. All values to be reported in subsequent analyses were rated on the basis of this criterion. When behavioral states were scored by independent raters, agreement values for the two states (on- and off-target) yielded 90% agreement across raters. Disagreements were settled by re-examining the tapes, discussing the ratings, and arriving at a joint decision agreeable to both raters.

Self-report procedures and categories

In order to evaluate self-report statements, a coding system used by Pollio (1984) in his analysis of what students reported they were aware of during college lectures was adapted to the present context. The final

system consisted of two superordinate categories: on-target and off-target. An on-target coding was scored if the statement written by an audience member indicated that he or she was listening to the tape; was relating present material to other aspects of his or her life; was forming opinions, evaluations or ideas about the material; was aware of the comedian doing the routine; or reported just listening passively to the material. All on-target statements were coded into three, more specific, categories: Routine-focused, Suggested by Routine, and Comedian focused. The first category was defined by statements that reflected or used words referring to events in the routine; for example, "I was thinking of a guy begging his woman not to leave," "I was aware of a woman being pregnant." The second category was defined by statements that referred to something relating to the present topic; for example, "I was wondering what I would do in that situation," "I was thinking of when my friends do drugs." The third category was scored whenever a statement referred directly to the comedian, for example, "I was imagining Cosby on stage," "I don't like Pryor's language," "Cosby makes funny sounds."

There were five off-target categories: Other People, Time, Body/Self, Mood, and Present Environment. The category of Other People includes observing or thinking about some other person either in the present (or some other) situation. The category of Time included statements about something earlier or later today, something in the more distant future, and/or wondering about how much time was left. The category Body/Self included statements about feeling hungry, thinking of food, feeling sleepy, fighting sleep, feeling the need to go to bathroom, and so forth. The category of Mood was defined by statements referring to being bored, excited, sad, happy, and so forth. Finally, the category Environment was coded whenever the statement referred to something in the environment (decor, a sound, a smell, and so forth) or to the experiment itself, that is, "I was waiting for the interruption."

Each participant produced 8 self-reports: 4 in response to Cosby and 4 in response to Pryor. Since some self-reports contained more than a single statement, a procedure was developed to take this into account. If one (or both) statements for any given interruption was completely on-target or completely off-target, it was given a value of 1.0 on-target or 1.0 off-target. If the statement contained 2 elements, and one was on-target and the other was off-target, the statement was coded as .5 on-target and .5 off-target. The use of this metric meant that no individual participant could have a total value greater than 4.0 for either comedian.

All analyses employing numerical evaluation of the data used this procedure for quantifying individual protocols.

Reliability for the self-report coding system was assessed in the following way: After all protocols had been scored by a single highly trained rater, a six month interval was allowed to pass, and the same rater then rescored all 456 protocols. Results of this procedure produced a 94% agreement value across both sets of ratings for the categories of on and off-target. They also produced an 89% agreement value for the 3 specific sub-codings comprising the on-target group, and a 79% overall agreement value for the 5 off-target categories. Items producing discrepant ratings were re-examined and assigned a specific coding on the basis of this re-examination.

Results

For ease of presentation, results are divided into three major sections: the first presents behavioral data, the second presents self-report data, and the third section presents a concordance analysis of results produced by both procedures.

Behavioral data

Each participant's behavior was coded into 11 categories. To reduce the total number of categories, and to evaluate natural clusters of audience response, correlations were computed between all possible pairs of categories. More complicated statistical analyses (for example, factor analysis) were not undertaken due to the small number of cases. Table 1 presents intercorrelations for results produced by combining the total number of entries in each category for reactions to both Cosby and Pryor. Although correlations also were computed separately for total responses per category for Cosby and Pryor separately, these results were similar to those computed across both performers. Where there were points of difference in the correlational patterns yielded by each comedian, these will be noted.

Of the fifty-five correlations contained in Table 1, 12 are significant at $p < .05$. Of these correlations one was between laughing and smiling ($r = .38$); five additional correlations, all negative, involved category 11 (sitting still). In addition, category 3 (lowering head) correlated with

Table 1. *Intercorrelations between pairs of behavioral categories*

	2	3	4	5	6	7	8	9	10	11	Category name
1.	.38*	-.19	-.04	-.22	.08	-.02	.12	-.14	.12	-.21	Smiling
2.	X	-.19	.00	-.07	.23	-.05	.03	-.14	.03	-.41*	Laughing
3.		X	-.11	.10	-.02	-.17	-.04	.34*	.10	-.14	Lower head
4.			X	.08	.11	.12	.06	.27*	.32*	-.18	Turn head
5.				X	.36*	.11	.31	.14	.21	-.07	Hand to head
6.					X	.44*	.33*	.13	.07	-.48*	Hand to face
7.						X	.00	.17	-.15	-.26*	Hand to body
8.							X	.00	.10	-.29*	Hand to hand
9.								X	-.08	-.49*	Looking away
10.									X	.02	Talking
11.											Sitting still

* $r = .26$; $p < .05$

category 9 (looking around), and category 4 (turning head) correlated with both categories 9 and 10 (looking and talking). All remaining correlations involved categories 5, 6, 7 and 8 and concerned a hand movement of one sort or another. On the basis of these results, it seems possible to organize audience behaviors into 3 major categories: one involving the responses of laughing and smiling; a second involving social responses such as talking, looking around, and lowering and turning one's head; and a third involving various movements of the hand. Of this latter set of behaviors, hand to face seems best understood as an embarrassed gesture whereas hand to head seems best understood as an instance of touching oneself.

Since these responses occurred a different number of times across the various conditions of the experiment, the following set was deemed most useful for purposes of further analysis: Set 1, laughing (frequency = 217) and smiling ($N = 185$); Set 2, lowering head ($N = 77$) and talking ($N = 30$); and Set 3, hand to head ($N = 35$) and hand to face ($N = 126$). Of the seven remaining behavioral categories, six occurred 30 or fewer times. Sitting still (category 11), however, occurred 380 times. The final set of dependent variables was comprised of seven categories, two directly concerned with humor, two concerned with social or interpersonal matters, and two concerned with touching oneself. The final category, sitting still, was considered both because of its high frequency of occurrence and because it defined a counterpart to all remaining categories.

Few differences were noted in the pattern of correlations to each comedian separately. The only noteworthy difference concerned

category 4, turning the head. For Cosby, category 4 correlated positively (.36) with category 10 (talking) and not at all (.06) with category 9 (looking away). These values were reversed for Pryor, where categories 4 and 9 yielded a correlation of .40, and categories 4 and 10 one of .13. What these results suggest is that when members of a Cosby audience turned their heads it was to speak with another member of the audience; when members of a Pryor audience turned their head it was to turn away from other audience members and to look to the side.

Table 2 presents mean values for the specific categories employed in the present study. Included are the primary humor responses of laughing and smiling, the primary movement responses of hand to head and sitting still, the primary social responses of lowering head and talking and, finally, the response of hand to face which seems to involve both the social aspect of being an embarrassed gesture as well as that of a more general movement response.

To evaluate differences among audience and comedian groups, a 4-factor analysis of variance was used in which the major factors were Company (friends/strangers), Gender (male, female, mixed), Order (first, second) and Comedian (Cosby, Pryor). The first three factors, as well as their interactions, were treated as between-subjects effects; the final factor was treated as a within-subjects effect as were all interactions. Results of these analyses revealed differences in the hand to face behavior (bottom line of Table 2) made in response to Cosby and Pryor ($F_{1,45} = 8.96$; $p < .01$) as well as in terms of whether comedians were listened to in the company of friends or strangers ($F_{1,45} = 5.60$; $p < .03$). Further analyses revealed that Comedian interacted significantly with Order ($F_{1,45} = 10.02$; $p < .01$) and in the interaction of Comedian X Company X Gender

Table 2. *Mean values for the seven most frequent behaviors as a function of comedian and social conditions*

Behavioral category	Cosby		Pryor	
	Friends	Strangers	Friends	Strangers
Smiling	9.48	8.77	10.40	7.56
Laughing	7.27	4.15	9.38	3.35
Sitting still	15.15	16.46	15.36	17.41
Hand to head	1.71	1.08	2.17	.96
Talking	3.27	0.00	1.63	0.00
Lowering head	2.83	2.97	3.53	3.45
Hand to face	7.33	4.40	5.48	3.84

($F_{2,45}=7.96; p<.01$). To provide some clarification of these interactions, the largest mean value was produced by groups of friends listening to Cosby first with the second largest values produced by groups of friends listening to Pryor second. Both results suggest that the hand to face gesture occurs most frequently under conditions where the individual is "comfortable," that is, when listening to Cosby first and Pryor second, within the context of a group of friends. The largest mean value for stranger groups occurred for individuals listening to Cosby first, again supporting such an interpretation of the data.

Although values provided by the category lowering head suggest that Pryor audiences engaged in this behavior more frequently than Cosby audiences, statistical analysis did not produce significant effects. A behavioral category producing less equivocal results was that of talking. Although the frequency of this behavior was not high, results indicated that members of friends audiences talked to one another more frequently than members of strangers audiences ($F_{1,45}=28.09; p<.001$) suggesting the initial selection procedure did produce groups of friends and strangers. Results also indicated that female friends spoke to each other more during performances by Cosby than by Pryor ($F_{2,45}=5.29; p<.01$).

Turning now to the category of hand to head, results indicated that friends audiences produced this behavior significantly more frequently than stranger audiences ($F_{1,45}=11.36; p<.01$). Although gender ($F_{2,45}=4.81; p<.02$) produced significant effects (with the order female, mixed, male), there were no further interactions nor any significant comedian effects. The case for sitting still revealed only one significant comedian effect, and that involved the interaction of Comedian X Gender X Company ($F_{2,45}=7.99; p<.01$). Analysis also indicated significant Company effects; i.e., strangers sat still more frequently than friends ($F_{1,45}=7.45; p<.01$), as well as significant interaction effects involving Gender X Order ($F_{2,45}=7.52; p<.02$) and Gender X Order X Company ($F_{2,45}=4.93; p<.02$).

The top two lines of Table 2 present results for the categories of laughing and smiling. Results for smiling were less dramatic than those for laughing and revealed two significant interaction effects: Comedian X Gender ($F_{2,45}=4.56; p<.02$) and Comedian X Order ($F_{1,45}=6.01; p<.02$). These interactions indicate that mixed groups showed no difference between Cosby and Pryor and that all-male groups smiled significantly more frequently to Pryor than to Cosby. The Comedian X Order interaction revealed no difference for Pryor whether he was listened to

first or second, and a profound increase in smiling for Cosby when his routine followed Pryor rather than preceded it.

Because results for laughing are so crucial for purposes of the present analysis, a more complete table was prepared. An examination of the data contained in Table 3 reveals significant Company ($F_{1,45} = 15.75$; $p < .001$), Gender ($F_{2,45} = 13.85$; $p < .001$), and Order ($F_{1,45} = 6.24$; $p < .02$) effects as well as significant interactions involving Company X Gender ($F_{2,45} = 5.04$; $p < .02$) and Gender X Order ($F_{2,45} = 4.25$; $p < .03$). Although there was no overall comedian effect ($F_{1,45} = 1.15$; $p > .05$), there were significant effects for Comedian X Company ($F_{1,45} = 11.47$; $p < .01$), Comedian X Gender ($F_{2,45} = 25.26$; $p < .001$), and Comedian X Order ($F_{1,45} = 4.17$; $p < .05$). The following interactions also were significant: Comedian X Company X Gender ($F_{2,45} = 5.08$; $p < .01$) Comedian X Gender X Order ($F_{2,45} = 5.84$; $p < .01$), and Comedian X Gender X Order X Company ($F_{2,45} = 10.14$; $p < .001$).

Self-report data

Each participant was interrupted four times during each comedian's performance yielding 8 self-reports per person. These events were coded initially into the two major state categories of on-target and off-target. The category of on-target was further divided into three mutually exclusive sub-groups: focused on routine, focused on comedian, and focused on events suggested by routine. Off-target self-reports were coded into five mutually exclusive categories: other people, time, body, mood, and present environment.

Table 3. *Patterns of laughter for various conditions of the present experiment*

Social setting	Gender	Comedian Cosby		Pryor	
		1	2	1	2
Friends	Male	3.60	17.50	22.75	15.80
	Female	5.20	4.80	1.20	4.80
	Mixed	9.25	3.25	8.00	3.75
Strangers	Male	3.60	6.25	9.00	4.20
	Female	2.00	8.40	1.60	2.20
	Mixed	1.80	2.83	.67	2.40

Table 4 presents mean values for self-report protocols coded on the basis of these categories. To evaluate differences statistically, four-factor analyses of variance, similar to those reported in connection with behavioral data, were performed. For these analyses, Company, Gender and Order, as well as their interactions, were treated as between-subject effects. Comedians, and all higher-order interactions involving this factor, were treated as within-subject effects.

Looking first at the category Total on-target, results indicated significant Comedian ($F_{1,45}=39.43; p<.001$) and Company ($F_{1,45}=5.94; p<.02$) effects. In addition, there were significant first-order effects for Gender ($F_{2,45}=5.01; p<.02$) and Order ($F_{1,45}=5.14; p<.03$), as well as significant higher-order effects for the interaction of Company X Gender X Order ($F_{2,45}=4.70; p<.02$). Additional higher-order effects were found for Comedian X Order ($F_{1,45}=4.88; p<.04$), Comedian X Company X Gender ($F_{2,45}=4.53; p<.02$) and Comedian X Order X Gender ($F_{2,45}=4.01; p<.03$). The overall percentage of on-target remarks was 85% for both Cosby groups and 69% for both Pryor groups.

An examination of the three sub-categories comprising the total category of on-target events revealed that for the sub-category of Routine-focused, the difference between friends and strangers was significant ($F_{1,45}=10.08; p<.01$) as was its interaction with Gender ($F_{2,45}=3.80; p<.03$). An examination of the second on-target category — Comedian-focused — indicated that audience members focused more on

Table 4. Mean values for various self-report categories for different settings and comedians

	Cosby Friends	Strangers	Pryor Friends	Strangers
On-target				
Total	3.56	3.28	3.02	2.46
Routine	1.24	.84	1.17	.62
Comedian	.77	1.00	1.30	1.20
Suggested by	1.56	1.44	.56	.64
Off-target				
Total	.44	.72	.98	1.54
Other	.12	.26	.40	.54
Time	.02	.04	.18	.23
Body	.22	.12	.23	.31
Mood	.00	.09	.07	.09
Environment	.08	.20	.10	.37

Pryor than on Cosby ($F_{1,45}=8.16; p<.01$); no further comparisons nor interactions were significant. An examination of the final on-target category — suggested by Routine — revealed a strong difference in favor of Cosby ($F_{1,45}=38.47; p<.001$) under both friend and stranger conditions. In addition, the Company X Gender ($F_{2,45}=8.11; p<.01$) and the Company X Gender X Comedian ($F_{2,45}=3.92; p<.03$) interactions were significant indicating that female and mixed audiences tended to provide far fewer codings of “suggested-by” for Pryor than for Cosby. Under stranger conditions this was also the case for all male groups. In general, all groups showed fewer “suggested-by” codings for Pryor than for Cosby.

Data entries for the five subcategories comprising the total off-target category were much less numerous than for the three on-target categories. For this reason, statistical results for each category must be tempered by looking at the total proportion of off-target responses falling under each category. For example, the category of Other People indicates a rather clear difference between comedians (.38 to .94), and results of an ANOVA performed on these data did reveal a significant Comedian effect ($F_{1,45}=10.98; p<.01$). An examination of the proportion of off-target codings falling into this sub-category, however, indicates much less of difference between comedians: .27 (.12/.44) + .36 (.26/.72) for Cosby as opposed to .41 (.40/.98) + .35 (.54/1.54) for Pryor. Although it is not clear which is the better metric — absolute value or proportion of total (off-target) codings — all statistical analyses will be reported for mean values only; where an analysis of proportions might change the meaning, it will be noted.

An examination of the second off-target category, Time, revealed only one significant effect, Comedian ($F_{1,45}=10.94; p<.02$), with Pryor audience members providing self-reports concerned with time more frequently than members of Cosby audiences. The only significant effect for the off-target category of Body concerned Gender ($F_{2,45}=4.03; p<.03$), with female and mixed groups yielding significantly more codings than all male groups. For the category of Mood, all values were low, and only Order yielded a significant effect ($F_{1,45}=4.46; p<.05$). Finally, self-reports having a focus on the Environment were significantly more frequent for strangers than for friends ($F_{1,45}=7.87; p<.01$).

Results of self-report data indicate that audience members were on-target more frequently when with friends than with strangers and when listening to Cosby than when listening to Pryor. For Cosby,

audience members focused on ideas and images suggested by the routine slightly more frequently than on the routine itself. For Pryor, on-target self-reports revealed that audience members focused most frequently on Pryor, less frequently on the routine, and least frequently on ideas suggested by the routine. In terms of off-target categories, Other was the major category for 3 of 4 groups: Pryor-friends, Pryor-strangers and Cosby-strangers. The most frequent off-target category for Cosby-friends was Body. Although Body was a frequent category for both Cosby-stranger and Pryor-stranger audiences, members of these two groups tended to be off-target more frequently by focusing on the immediate environment than on their bodies.

Concordances between behavioral and self-report codings

The specific procedures used in the present study allow for an instance by instance comparison of the degree to which self-report and behavioral codings yield a comparable picture of audience reaction. Each of the 8 specific interruptions for each participant was located and related to the behavioral state (on- or off-target) of the relevant individual. Judgments of behavioral state were considered only for the 30-second period immediately preceding the interruption. Following this, self-report data were examined to determine how frequently a judgment of on-target and off-target was scored. Because 16% of the self-reports could be scored as both on and off-target (usually there were two separate statements in the report), disagreements in behavioral judgments also were scored as on/off when one rater scored the person as on-target and the other scored the person as off-target. Of the 456 total judgments, 11% fell into this category.

Table 5 presents values relevant to a two-way classification analysis in which the 3 column headings — on, on/off, and off — refer to self-report codings and in which the 3 row headings — on, on/off and off — refer to behavioral state codings. Concordant values between self-report and behavioral codings are defined by diagonal entries. An examination of these values indicates that about 63% (that is, 286/456) fell into these three cells. Complete disagreements — that is, where one categorization was coded as on-target and the other as off — comprised 63 instances or 14% of the total. Of these 63 disagreements, the largest number (43) involved cases in which the behavioral coding was on-target

Table 5. *Concordance between on- and off-target behavioral and self-report codings*

Behavioral codings	Self-report codings			Sum	%
	On	On/off	Off		
On	262	59	43	364	80%
On/off	30	8	10	48	11%
Off	20	8	16	44	10%
Sum	312	75	69	456	100%
%	68%	16%	15%	100%	...

and the self-report off-target. An examination of marginal totals provides some numerical indication as to why this was the case: Whereas 80% of all behavioral states were scored as on-target, only 68% of self-reports were so coded.

When separate 3 X 3 tables of this type were computed for Cosby and Pryor, results indicated that of the 228 items scored for each comedian, Cosby audiences yielded a 70% total agreement score (159/228) whereas Pryor audiences yielded a 56% total-agreement score (127/228). For Cosby groups, 10% of entries fell in the total-disagree category; for Pryor, 18% were so coded. Of the 23 total-disagree entries for Cosby, 14 (61%) involved the case in which the behavioral coding was on target and the self-report coding was off-target; the comparable value was 73% (29/40) for Pryor. The total percentage of behavioral codings that were scored as on-target was 84% for Cosby and 75% for Pryor; comparable self-report values were 79% and 58%, respectively.

The same sort of concordance analysis, performed on the basis of a friends/strangers split, produced total agreement values of 59% (142/240) for strangers and 66% (144/216) for friends. Total disagreement values were 14% for both strangers (33/240) and friends groups (30/216). The most marked effect the friends/strangers split had on present results concerned the percentage of on-target self-report values for both groups, which was 60% for strangers and 77% for friends. Behavioral on-target values, however, were only slightly different for strangers (82%) than for friends (77%).

Perhaps the major finding is that total agreement values between behavioral and self-report codings never exceeded 70% and fell as low as 56% yielding an average value of 63%. Complete disagreements ranged from 18% to 10% with an overall mean of 14%. Of these disagreements, the largest number concerned being on-target in terms of behavior and

off-target in terms of self-report. When this difference was evaluated for each comedian separately, results indicated that Pryor audience members, more often than Cosby audience members, were coded behaviorally as attending to the performance than was the case for their corresponding self-reports.

Discussion

There seem to be two different perspectives that can be taken in regard to a person's reactions to a particular comic performance: that of the person, and/or that of some other person in the situation such as the comedian, another member of the audience, or a psychologist observing both the performer and the audience. Within the context of the present study, the first-person perspective was assessed in terms of self-reports and the third-person perspective was assessed in terms of a behavioral record of public actions. Considering self-reports and behavioral data in this way is not meant to suggest separate and independent events but different perspectives on the same event. Although, as psychologists, we try to produce data that are objective (that is, behavior, carefully and well observed), such observations yield only one aspect of the total field defining human action in complex social settings.

The usual procedure for taking both perspectives into account is to argue that a researcher may take subjective (or objective) data into account only to determine if objective (or subjective) measures offer a "valid" picture of some person in some situation. Without going into such issues as politeness, unconscious awareness, lying, and so on, it seems wiser to assume that what is important, methodologically, is to determine whether or not the two perspectives agree with one another; not which is more significant on some *a priori* basis. Only if there is almost complete agreement between the two would it seem reasonable to use only one measure, and we do not yet know how often, or even if, such a circumstance occurs very frequently.

Within the present context, results indicate that Pryor audiences are likely to yield a lesser degree of concordance between behavioral and self-report measures than is the case for Cosby audiences. If self-reports are viewed as presenting a me-for-me perspective, and behavioral records as presenting a me-for-others perspective, such results seem interpretable. While I personally may find the comic material difficult to deal with, and

not pay attention to it, my behavior, which is visible to other people, stays oriented toward the performance. This is not to say that I am trying to be “polite,” or even “socially-acceptable”; rather, it suggests that there are different constraints on my me-for-others activities (public behavior) than on my me-for-me activities (personal reactions). Although self-reports, in the scheme of this experiment, also are (or become) “public” record, they have been designed to ask the person to pay less attention to the immediate social setting and more to personal experience.

When an examination is made of what participants report they were aware of under various conditions of the experiment, Pryor subjects not only report they were most aware of Pryor and least aware of ideas and events suggested by the comic routine, they also report they were most aware of other people and/or of the present situation itself. Cosby (friend) subjects were most aware of ideas or situations suggested by the routine and much less aware of other people and/or the present situation. Cosby (stranger) subjects, while frequently aware of ideas and events suggested by the routine, produce a great many more self-reports concerned with other people and/or the present environment than was the case for Cosby (friend) participants.

What these data suggest is that Pryor audience members stay rooted in the present situation; Cosby participants, however, often follow him in narrative descriptions of imaginary places and events. It was a frequent occurrence to hear Cosby subjects — especially in friends groups — tell one another how Cosby talked about things that were like “my life.” When Pryor subjects were on-target to the comic performance, they were far more likely than Cosby subjects to focus on the performer and less on other contexts suggested by the routine, or even on the routine itself. It is as if Pryor-the-performer fascinates audience members to a greater degree than Cosby-the-performer. For Pryor, Pryor is frequently at issue in his humor; for Cosby, the unfolding material in all of its ramifications is usually at issue.

As Murphy and Pollio (1975) noted, Cosby may be characterized as a story-teller comedian for whom some context other than the present one is developed and described. While Pryor also tells stories, audience members present to his routines stay much more in contact with the present situation including a keen awareness of Pryor himself. In terms of more anthropological considerations, it seems reasonable to identify Pryor’s present-centered and tendentious style of humor with that of the priest/clown category so frequent in native American cultures (Charles

1945; Crumrine 1969; Makarius 1970). Such sacred/profane, clown/priests are allowed great license with taboo material and actions largely because there is little to fear that the taboo action or topic will get out of hand; the clowns are priests, and their performance is socially sanctioned. Although such performances may force vigilance on the part of audience members, the situation is not usually experienced as threatening or disturbing since the comic performer (and performance) is completely sensible within the context of the culture. While Pryor clearly is no priest, his humor may be hypothesized to represent a continuation of the comic tradition associated with, and sustained by, sacred/profane, comic/priests so frequently described in the anthropological literature.

How does this picture of differences between Cosby and Pryor and between friends and stranger audiences hold up when considered in the light of behavioral data? As a starting point, it is important to note that the present analysis was based on behavioral results provided in an earlier study (Murphy and Pollio 1975). In general, behavioral results were comparable across studies; members of friend audiences generally exhibited more behavior of any and all types, including laughing and smiling, than did members of stranger audiences. Although there was no difference, for Cosby audiences, in laughing and smiling across the friends/strangers conditions of the original experiment, such differences occurred in regard to laughter in the present study. Despite this difference, the pattern of results is sufficiently similar across experiments to suggest that comedian and audience factors differentially affect how individual audience members behave in regard to narrative and tendentious comedians under both friends and stranger contexts.

Although only two different comedians were studied in detail in the present study, comedians such as Don Rickles also have been experimentally evaluated in this type of experimental setting. In addition, several in-class demonstrations have been run by the senior author with other comedians exhibiting comic profiles similar to both Pryor and Rickles; for example, George Carlin, Eddie Murphy, and Joan Rivers, and similar behavioral results have been observed in audiences comprised largely of strangers. The effect is sufficiently strong and reliable as to be useful in undergraduate classes and/or public lectures. In the latter case, however, using this demonstration may so alienate members of an audience as to make the remainder of the lecture a relatively unpleasant experience for both the lecturer and the audience. The important empirical point in all of these cases, however, is that comedians similar to Don Rickles and

Richard Pryor yield effects comparable to those reported in the present case, and that comedians similar to Bill Cosby, such as Steve Allen and Lilly Tomlin, regularly do not. While the present sample of comedians was composed of only two exemplars, the point should not be missed that similar effects occur for other comedians exhibiting similar comic personas and/or styles.

The original Murphy/Pollio (1975) study was taken as one starting point for a field theory of humor in which humorous events were conceptualized as constructed momentary figures emerging from the personal and social contexts defining a particular comic situation (Pollio 1983). The field in which comic action takes place is delineated not only by its immediate interpersonal situation, but also by social institutions and traditions that define what is acceptable and what is taboo. Reactions to comedy also must be contextualized in terms of the specific experiences associated with the bodily gestures of laughing and, to a lesser extent, of smiling (see Plessner 1970 [1932] for some suggestions on this point). A field theory of humor, then, requires any would-be analysis to take account of nothing less than an embodied person in the full rich context of his or her contemporary, interpersonal, historical, and socio-cultural world. In this world, what the person does and what the person experiences are inter-related events that both affect and are affected by conditions of the field in which they take place. The reaction to humor is an embodied field event and although certain contexts may dissociate laughter, smiling, self-reports and other behaviors in different ways, such deviations will be comprehensible only within an approach rich enough to encompass the total range of factors and contexts defining the socio-personal field of some particular individual, at some particular moment, in some particular cultural setting.

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