The Benny Hill Effect: Switching cognitive programmes underlying subjective estimations of the outcomes of bargains concerning distributions of rewards

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Abstract

The pun of a sketch from the Benny Hill show was related to a switch of cognitive information processing programmes underlying the interpretation of the scene represented. The audience would be biased to interpret it following a cognitive programme anchored on the constructs self and other (SO-programme), while Benny Hill makes a statement that would impose a cognitive programme anchored on constructs associated with the third pronominal person (3P-programme). In an experiment it was attempted to make subjects to switch from SO- to 3P-programmes (Benny Hill effect) when they were making subjective estimations of outcomes of bargains concerning distributions of rewards. The hypothesis was confirmed that the 3P-programme was activated by providing additional information pertaining to substantiate the stimulus persons in such a way as to make them stand out as anchors for the processing of the information. However, the data showed also that the mere substantiation of stimulus persons was not yet sufficient to produce the given shift of cognitive programmes. The results are discussed in the light of theories concerning fairness, social values and allocation rules.

INTRODUCTION

In one of his shows, the British comic 'Benny Hill' enacts an old joke that goes as follows. On a party Benny's friend invites him to take a piece of cake. Actually, there are two pieces left on the cake-dish. Benny examines them carefully and takes the biggest one. The friend looks ruffled and says: 'If you had offered me the cake, I would have taken the smallest piece'. Whereupon Benny replies: 'Well you got it! Why do you complain?'

One could wonder why people find Benny's reply funny and surprising, his answer being perfectly logical. A possible explanation may be found in Peeters (1983, 1986), where it was shown that the same stimulus information can be processed in at least two mutually unrelated ways that both are logically consistent and function like alternative cognitive programmes producing alternative discourses about reality. The

distinction between both alternatives depends on whether constructs related to the first and second pronominal person (I thou) or constructs related to the third pronominal person (he, she, etc.) are used as cognitive anchors. In the former case, we have the so-called *SO (self-other) programme* leading to an *SO-discourse*, while in the latter case the *3P (third person) programme* leading to a *3P-discourse*. The distinction between SO- and 3P-programmes can be illustrated by the following example. Imagine that a committee is going to be elected and that A and B are eligibles. Before the ballot, A says: 'I vote for myself', whereupon B declares: 'I vote like A'. Whom is B voting for? According to the SO-programme B voting like A means: for *oneself (me)* and not for the *other (you)* and thus for B. However, according to the 3P-programme to vote like A means: to vote for *him called A* and not for *him called B*. Thus a perceiver who applies the 3P-programme derives that B votes for A. In the present example the SO- and 3P-programmes lead to opposite outcomes. However, in Peeters (1983) formalizations of SO- and 3P-discourses are reported showing that the potential range of contradicting instances is out-balanced by the potential range of mutual confirming instances. This means that as a whole both discourses are unrelated.

In the same study, experiments are reported that were designed in order to assess the relative impact of the SO- and 3P-programmes upon the formation of impressions of the personalities of stimulus persons on the basis of information about affective relations between the stimulus persons. The results showed unexpectedly that the impressions subjects formed were only consistent with the SO-programme and not at all with the 3P-programme (Peeters, 1983). Hence, it looks like people are biased to use the SO- rather than the 3P-programme and this bias may account for the pun of Benny Hill's sketch. Indeed the audience's interpretation of the reproach made to Benny by his friend is anchored on the constructs *self* and *other* rather than on the constructs *he Benny* and *he the friend*. Using *self* and *other* as anchors, the audience infers disagreement between Benny and the friend: Benny takes the biggest piece for the *self* and leaves the smallest to the *other*, while the friend holds that one should take the smallest piece for the *self* and leave the biggest one to the *other*. However, using alternatively the constructs *he Benny* and *he the friend* as anchors, the disagreement is dissipated: Benny assigns the biggest piece to *him Benny* and the smallest piece to *him the friend*, while also the friend claims that he would assign the smallest piece to *him the friend* and the biggest one to *him Benny*. The pun of Benny's reply is then produced in that it makes the SO-biased audience aware of the alternative 3P-discourse. This switch from the SO- to the 3P-programme, we call henceforth 'Benny Hill effect'.

At this point the question arises whether we really need Benny Hill in order to produce a Benny Hill effect. Is the SO-bias insuperable or are there conditions in which subjects leave spontaneously the SO-discourse in order to adopt a 3P-discourse? In Peeters (1983) it was suggested that subjects may switch to the 3P-programme if additional information is provided that makes stimulus persons stand out as salient 3P-constructs available for being used as cognitive anchors. In the scene of the cake, the stimulus persons 'Benny' and 'the friend' would lack the necessary substance in order to make the audience perceive the situation as a division of cake between *him Benny* and *him the friend* rather than between *self* and *other*. Similar substantiation may be provided by information pushing the audience to look at the situation from the perspective of need- or equity-rules as bases for distributive behaviour. Indeed,

categories such as *he who needs cake* and *he who deserves cake* are typical 3P-related constructs, the distinction between self and other being disregarded. If Benny is allocated the biggest piece of cake because he needs or deserves it, then it is irrelevant from the perspective of need- and equity-principles whether the piece is allocated by Benny himself or by the other person. Hence, the sketch with the cake would lose its pun if Benny, when taking the biggest piece, would say: 'I take this because I need and deserve it', and the friend would say: 'If you would offer me the cake I would take the smallest piece because I neither need nor deserve any more'. The audience would already be set for the 3P-programme and Benny's reply to his friend—that he should not complain because he effectively got the smallest piece—would become a trivial and redundant statement.

On the basis of the present rationale we can formulate the following hypotheses concerning the differential activation of the cognitive SO- and 3P-programmes.

Hypothesis 1

In that subjects are biased towards the SO-programme, they should process information concerning stimulus persons in a way consistent with the SO-programme as long as no specific information is provided that would make the stimulus persons stand out as cognitive anchors.

Hypothesis 2

The 3P-programme is activated instead of the SO-programme (Benny Hill effect) if stimulus persons are substantiated by specific information in such a way as to make them salient as cognitive anchors. This would be the case if the information about the stimulus persons is not limited to the allocations they make but includes, in addition, the arguments (in terms of equity or need) they use to justify their allocations.

In order to test these hypotheses a paper-and-pencil experiment was designed in which subjects were asked to estimate the outcomes of bargains. Each bargain involved two stimulus persons (A and B) who made propositions about a division of rewards. On the basis of hypothesis 1 was predicted that if no more information was provided than just A and B's propositions without any further justification, then subjects would derive their predictions about the outcomes of the bargains in a way consistent with the SO-programme. In two other conditions, A and B were substantiated in that information was provided about how they justified their propositions in terms of equity- and need-rules. One condition was called the 'same information condition' (abbreviated: SAMINFO) in that A and B used the same justificatory arguments, both arguing that the distributions they proposed gave to everyone that which they deserved (equity argument) and which they needed (need argument). The other condition was called the 'different-information condition' (abbreviated: DIFFINFO) in that A used only the equity argument while B only the need argument. On the basis of hypothesis 2 was predicted that in both conditions the substantiation of A and B would make subjects derive their predictions in a way consistent with the 3P-programme. The experiment was designed in a way allowing to detect still other rules subjects might use in order to infer their predictions besides the above mentioned rules related to the SO- and 3P-programmes. For instance, subjects might proceed from an *equality*

rule—the same for everybody—or from a *simple compromise* between the propositions that are made, each person being expected to get an amount that is proportional to the sum or average of the amounts that are claimed for him, irrespective of whether the claims are made by himself or by others, by A or by B.

METHOD

Participants

For the sake of external validity two replications were run: replication 1 with 24 advanced psychology students from the University of Leuven as subjects, and replication 2 with 24 students and young graduates, from the same university and other institutes of higher education level as well, who formed a heterogeneous sample having in common only that they never had been enrolled in a programme of psychology or educational sciences. The subjects were personally invited by the experimenter, an advanced psychology student himself, to take part in an individual experimental session. There are about as many males as females and both were equally spread over the various conditions. The sessions of replication 1 took place in an office of the faculty, while those of replication 2 in the subject's or experimenter's private flat.

Procedure

The procedure involved four steps: (1) general instructions, (2) a pretest part (item series 1), (3) an experimental-test part (item series 2), and (4) a 'fairness-measurement' part (item series 3).

General instructions

At the onset of the session, the subject got 'booklet 1' with general instructions that were read aloud by the experimenter while the subject could follow in his booklet. The text being in Dutch, and quite comprehensive, only a summary is provided.¹

First, the subjects were informed that the experiment was designed in order to study the ways in which people form *preliminary hypotheses* or *expectations* about reality on the basis of incomplete information. The concept of 'preliminary hypothesis' was elucidated by means of examples such as about a noise that is first attributed to a motor cycle but ultimately turns out to be produced by a water pump. Then the subjects were asked to consider a hypothetical situation involving a group of young people who had sold lottery tickets as part of a campaign in favour of a cultural centre and were going to receive, as recompenses, the prizes that were not collected by the winners. These prizes consisted of tickets that could be exchanged for goods in the local stores. The director of the centre was charged with the distribution of the tickets. As he lacked sufficient information to do this in a fair manner, he organized a meeting where he invited each young person to make a ranking list of all those who had taken part in the campaign—including oneself—ranking high those

¹ An English translation of the full instructions can be obtained from the author.

who should get large amounts of tickets while ranking low those who should get small amounts. It was explained to the subjects that their task would be to make preliminary estimations about how the division of the tickets would ultimately turn out. Therefore they would get information from the ranking lists made by the young people. However, in order to simplify the task the given information would be split up into a series of items. Per item information about only two of the young people would be presented. They would be referred to as A and B, being assumed that A and B represented different pairs in different items. The information would concern the ranks A and B had assigned to themselves and to each other. For each item the subjects should give their estimation of the final division of tickets between A and B by marking one of six alternatives:

1. Considerably *more* tickets for A than for B
2. Considerably *more* tickets for B than for A
3. I hesitate between 1 and 2. Thus: *more* tickets for the one than for the other but I cannot tell for whom
4. A relatively *small amount* of tickets for *both*
5. A relatively *high amount* of tickets for *both*
6. I hesitate between 4 and 5. Thus: *equal amounts* for both but I cannot tell whether they would be small or high amounts

Pretest part (item series 1)

After booklet 1 was read, the experimenter presented booklet 2. The front page displayed the following instruction: 'Here follow a first series of items. You can work rather quickly: indeed you note only your first impressions. Take the items in the order in which they are presented without returning to previous items and without looking ahead to items that follow'.

Then followed the first series of items. Each item was printed on a separate page and consisted of a stimulus part (A and B's propositions about the amounts of tickets to be given to themselves and to each other) and a response part (the six response alternatives described higher). The stimulus parts of the items consisted simply of the rankings A and B had made of themselves and of each other. The items corresponded to 16 formal patterns of relations between A and B high rankings representing positive relations while low rankings negative ones. More especially each item corresponded to one of the 16 relational patterns (marked by letter symbols from a to p) presented in the upper part of Table 1, where + and - signs are to be interpreted respectively as positive and negative relations. For instance: 'rel. AB+' means: 'a positive relation from A to B'. The relation can be represented as a vector or arrow. In the given example A belongs to the origin of the vector (the shaft of the arrow) while B to the terminal of the vector (the point of the arrow). In the encoding of the items, the positive AB relation means that A has assigned a high rank to B, which indicates that A claims that B should get a large amount of tickets (see above). Relational pattern f then means that A claims large amounts of tickets for himself as well as for B, while B claims small amounts for himself as well as for A. The corresponding 'item f' was formulated as follows:

- 'A assigns high ranks to oneself as well as to B.
B assigns low ranks to oneself as well as to A'.

Item j was formulated as follows:

'A assigns a high rank to oneself but a low rank to B.
B assigns a low rank to oneself but a high rank to A'.

The items were presented in four counterbalanced orders that varied between subjects but were equally spread over conditions between subjects.

Experimental part (item series 2)

After the 16 pretest items followed a new instruction page which varied between the two experimental conditions (SAMINFO and DIFFINFO) at the one side, and a control condition at the other side. The exact text (translated from Dutch) follows below.

Experimental conditions (SAMINFO and DIFFINFO) 'These were thus your first guesses about the ultimate divisions of the tickets. We shall now run through the same items again, but this time some *additional information* will be provided. You answer, just as the time before, by marking one of the six possible answers. Thereby you should not try to remember your answers on the previous series of items. Indeed, having additional information it is possible that you will no longer give the same answers. Notice that still your answers are estimations. Definitive answers are only possible after all relevant information would have been provided'.

Control condition 'These were thus your first guesses about the ultimate division of the tickets. They were intended as preliminary exercises in order to make you acquainted with the procedure. However, from now on we start definitively. We shall begin with running over the same items once more but this time not as a practice trial but as a final test trial. You answer, just as the time before, by marking one of the six possible answers. Thereby you should not try to remember your answers to the previous series of items. Indeed, being more acquainted with the procedure now, it is possible that you will no longer give the same answers. Notice that still your answers are estimations. Definitive answers are only possible after all relevant information would have been provided'.

Then followed item series 2 which was analogous to series 1 (pretest) but differed slightly between conditions in the way described below.

(a) In the *SAMINFO condition*, items from series 2 differed only from those from series 1 in that A and B did not only assign ranks to themselves and to each other, but, in addition, justified these ranks in terms of equity- and need-rules. For instance, item f was formulated as follows:

'A assigns high ranks to oneself as well as to B in that he finds that they have worked very hard and, in addition, need the tickets very hard.
B assigns low ranks to oneself as well as to A in that he finds that they neither worked hard nor need the tickets very hard'.

Item j was formulated as follows:

'A assigns a high rank to oneself but a low rank to B in that he finds that he worked much harder and in addition needs the tickets much more than B.
B assigns a low rank to oneself but a high rank to A in that he finds that A worked much harder and in addition needs the tickets much more'.

(b) In the *DIFFINFO* condition the items differed from the *SAMINFO* condition, only in that A presented always only the equity argument (and not the need argument), while B presented always the need argument (and never the equity argument). Thus item f was formulated as follows:

'A assigns high ranks to oneself as well as to B in that he finds that they have worked very hard.

B assigns low ranks to oneself as well as to A in that he finds that they do not need the tickets very hard'.

Item j was formulated as follows:

'A assigns a high rank to oneself but a low rank to B in that he finds that he worked much harder than B.

B assigns a low rank to oneself but a high rank to A in that he finds that A needs the tickets much more'.

(c) In the *control* condition series 2 was identical to series 1 from the pretest.

The fairness measurement (item series 3)

Item series 3 was added for the sake of reliability and explorative purposes. It was an exact repetition of item series 2. However, this time the subjects were not asked to mark the outcomes they really expected for the given situations, but the outcomes they considered as fair. Hence item series 3 was preceded by an instruction page with the following text, which was the same in all conditions.

'We run through the same items once more. This time, however, we do not ask to guess how the tickets were divided in fact, but how a *really fair* distribution would have looked like. Thus you should consider that later on you may get all the necessary information required to allow for a fair distribution. Now we ask only to make a preliminary estimation of how you would later on conceive of that fair distribution'.

RESULTS

Processing of data

In order to uncover the SO- and 3P-programmes underlying the subjects' responses, we made use of an adapted version of the relation pattern model from Peeters (1983) that is presented in Table 1. As was explained earlier, the upper part of the table displays 16 relational patterns to which corresponded the 16 items of each item series. The middle part of the table displays the 'informational patterns' that correspond to the relational patterns. The former are the patterns of similarities and dissimilarities between A and B that are implied by the latter. Similarities are represented by + signs, while dissimilarities by - signs. The implied (dis)similarities vary not only between SO- and 3P-programmes but also between subprogrammes within the SO- and 3P-programmes. In this way, the rows 5 and 6 represent two subprogrammes that together constitute the SO-programme. Row 5 represents the 'O-part' of the SO-programme. A plus sign in row 5 indicates that A and B are similar in that they rank (or are ranked by) the *other* in the same way; a minus sign then indicates that they

Table 1. Informational patterns of similarities (+) and dissimilarities (–) implied by relational patterns of positive (+) and negative (–) relations of A and B with each other and with themselves

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
Relational patterns																
1 rel. AB	+	+	+	+	+	+	+	+	–	–	–	–	–	–	–	–
2 rel. BA	+	+	+	+	–	–	–	–	+	+	+	+	–	–	–	–
3 rel. AA	+	+	–	–	+	+	–	–	+	+	–	–	+	+	–	–
4 rel. BB	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–
Informational patterns																
SO-Programme																
5 O	+	+	+	+	–	–	–	–	–	–	–	–	+	+	+	+
6 S	+	–	–	+	+	–	–	+	+	–	–	+	+	–	–	+
3P-Programme																
7 ter-Aor	+	+	–	–	+	+	–	–	–	–	+	+	–	–	+	+
8 ter-Bor	+	–	+	–	–	+	–	+	+	–	+	–	–	+	–	+
9 or-Ater	+	+	–	–	–	–	+	+	+	+	–	–	–	–	+	+
10 or-Bter	+	–	+	–	+	–	+	–	–	+	–	+	–	+	–	+
Exemplary data patterns																
E1	+	–	–	+	–	+	–	–	–	–	+	–	+	–	–	+
E2	+	+	+	+	+	+	–	+	+	–	+	+	+	+	+	+
E3	+	–	–	+	–	–	+	–	–	+	–	–	+	–	–	+
E4	+	–	–	+	–	–	+	–	–	–	–	–	–	–	–	–
E5	+	+	+	+	+	–	–	+	+	–	–	+	+	+	+	+

rank (are ranked by) the *other* differently. Row 6 represents the S-part of the SO-programme: '+' indicates that A and B assign the same ranks, while '–' that they assign different ranks, to the *self*.

The rows 7 to 10 represent the subprogrammes that constitute the 3P-programme. Row 7 displays (dis)similarities between A and B implied by their belonging to the *terminals* of relations that have A as *origin* (*ter-Aor*). This means that A and B are similar as far as they get the same ranks from A, and dissimilar as far as they get different ranks from A. Row 8 displays (dis)similarities between A and B implied by their belonging to the *terminals* of relations that have B as *origin* (*ter-Bor*). This means that the (dis)similarities between A and B are defined as a function of the ranks assigned to them by B. Rows 7 and 8 form together the *terminal part* of the 3P-programme in that the (dis)similarities between A and B are defined as a function of their belonging to the *terminals* of relations originating from 'him or her called A' and 'him or her called B'. In an analogous way, rows 9 and 10 form together the *origin part* of the 3P-programme in that the (dis)similarities between A and B are defined as a function of their belonging to the *origins* of relations directed towards 'him or her called A' and 'him or her called B'. Thus, row 9 displays (dis)similarities between A and B implied by their belonging to the *origins* of relations directed towards A as *terminal* (*or-Ater*). This means that A and B are considered as similar as far as they assign both the same ranks to A, while as dissimilar as far as they assign different ranks to A. In the same way, row 10 displays (dis)similarities between A and B implied by their belonging to the *origins* of relations with B as *terminal* (*or-Bter*): the (dis)similarity between A and B is defined as a function of the ways they rank B.

Notice that the distinction between 'origin part' and 'terminal part' can also be made with respect to the SO-programme. It has been omitted, however, in that both show exactly the same patterns of (dis)similarities: 'A and B ranking each other the same way' is equivalent to 'A and B being ranked by each other the same way', and 'A and B ranking themselves the same way' is equivalent to 'A and B being ranked the same way by themselves'. Thus, the differential informational value of, for instance, 'A ranks an other person high' versus 'A is ranked high by an other person' is not detected by the present analysis in terms of (dis)similarities and requires a separate analysis.

An interesting characteristic of the six subprogrammes just described is that they are unrelated. Intercorrelations between rows 5–10 are zero. Hence they are suitable to serve as independent keys to interpret empirical patterns of (dis)similarities such as those implied by the subjects' responses. Indeed, each series of 16 items yields a row-pattern of empirical (dis)similarities, the response alternatives 1, 2, and 3 being coded as '–' (dissimilarity) while the alternatives 4, 5, and 6 as '+' (similarity). Some examples are presented in the lower part of table 1 (examples E1, E2, etc.). The score of agreement of an empirical row, provided by a subject, with the theoretical row-pattern k is called S_k and obtained by subtracting the number of items for which the empirically obtained signs disagree with the theoretical signs from the number of items for which both signs agree. The potential range of the resulting S_k scores reaches from –16 (perfect disagreement) to 16 (perfect agreement). A positive S_k score supports the cognitive programme represented by the row k . Thus more agreements than disagreements with row 5 result in a positive S_5 score which supports the O-part of the SO-programme. By way of example, S_k scores ($S_5, S_6, \dots, S_{10}$) were computed for the exemplary data patterns E1 . . . E5 (Table 1). They are reproduced in the right part of Table 2. Notice that E1 and E2 yielded the same set of S_k scores. E5 represents the data of a subject who applies systematically both the S- and the O-parts of the SO-programme. In cases where the one subpart of the SO-programme predicts similarity, while the other dissimilarity, the subject has opted for similarity. The latter option is consistent with the *equality rule* which results in a predominance of '+' responses (similarities) over '–' responses (dissimilarities). Subtracting the number of '–' from the number of '+' responses results in a score ' S_0 ' that, if positive, may reveal the use of an equality rule. E.g., for E5: $S_0 = 8$. For E4, however, $S_0 = -10$, which may reveal a subjective tendency to expect different outcomes for A and B contradicting the equality rule.

A positive S_k score is not to be regarded as an absolute proof that the subject really used the corresponding cognitive programme. Even if outcomes by chance are disregarded, the possibility remains that alternative implicit rules than the ones implied by the SO- and 3P-programmes yield the same S_k scores. In Peeters (1981) two of such alternatives were revealed. Both have in common that the distinctions between 'self' and 'other' as well as between A and B are disregarded. Informative value is only accorded to the relations. If it is accorded to the terminals of the relations, we have the so-called *whisky-drunk rule* that is illustrated by a hypothetical experiment in which subjects have to estimate whether A and B would become equally drunk in 16 situations corresponding to the 16 relational patterns in Table 1, given that positive relations mean: 'offers whisky to', while negative relations: 'does not offer whisky to'. The degrees of drunkenness assigned, for instance, to A would be determined by the whisky that is offered to A rather than by the whisky A offers

and this irrespective of whether it is offered by oneself or by the other, by A or by B. The application of this rule results in a configuration of S_k scores with the following characteristics: (a) all scores have the same absolute value but (b) S_9 and S_{10} are negative, the other S_k 's being positive (e.g. E1/2 in Table 2). If informative value is only accorded to the origins of the relations, we have the so-called 'whisky-resources rule' that would be applied if subjects have to estimate whether A and B have equal resources at their disposal for offering the whisky. Also this rule results in equal absolute S_k 's, but now S_7 and S_8 are the negative ones (e.g. E3 and E4 in Table 2). Especially the whisky-drunk rule may be relevant to the present experiment in that it corresponds to the *simple compromise*, subjects assuming that the amount of tickets that is ultimately assigned to a stimulus person is proportional to the average rank he obtained in the inquiry organized by the director.

Replications

Separate analyses reported by Willems (1984) showed a high agreement between the two replications. Hence in the present article only pooled data will be presented.

Pretest data (item series 1)

Mean S_k scores for item series 1 were computed over all of the 48 subjects and are presented in the left part of Table 2. All of them deviate significantly from zero by 2-tailed sign tests. Their signs show the typical configuration of the whisky-drunk rule. However, inconsistent with the whisky-drunk rule, the absolute value of S_5 is significantly higher than every other S_k ($p < 0.01$ by 2-tailed sign tests). This suggests that, in addition to the whisky-drunk rule, subjects may also have used the O-part of the SO-programme. Willems (1984) has shown that in replication 2, not only S_5 but also S_6 is significantly standing out suggesting that in the heterogeneous group of non-psychologists both parts of the SO-programme are used to about equal extents.

Table 2. Mean S_k scores of pretest (series 1), mean shifts of S_k scores in the experimental conditions (series 2) and some exemplary S_k scores

		Series 1	Shifts in series 2		Exemplary S_k scores				
		Pretest	Control	SAMINFO	DIFFINFO	E1/2	E3	E4	E5
		($N=48$)	($N=16$)	($N=16$)	($N=16$)				
SO-Programme									
O	(S_5)	4.71*	+0.38	0.00	-4.12 [†]	4	4	2	8
S	(S_6)	3.21*	+0.62	+1.50	-1.00	4	4	2	8
3P-Programme									
ter-Aor	(S_7)	2.38*	+1.12	+0.50	+4.38 [‡]	4	-4	-2	0
ter-Bor	(S_8)	2.25*	+0.50	+1.62 [§]	+0.88	4	-4	-2	0
or-Ater	(S_9)	-1.71*	-0.62	-0.75	+0.62	-4	4	2	0
or-Bter	(S_{10})	-2.54*	+0.62	-0.25	+0.62	-4	4	2	0

* $p < 0.01$ (2-tailed).

[†] $t = 3.51$ $df = 15$ $p < 0.005$ (1-tailed).

[‡] $t = 2.40$ $df = 15$ $p < 0.02$ (1-tailed).

[§] $t = 2.03$ $df = 15$ $p < 0.04$ (1-tailed).

The homogeneous group of advanced psychology students sticks to the O-part of the SO-programme, and this is the only noteworthy difference that was observed between replications.

The agreement of the data with both the whisky-drunk rule and the SO-programme shows up also in the configurations of S_k scores from individual subjects. No less than eight subjects displayed a perfect whisky-drunk pattern of six S_k values of exactly the same absolute sizes with S_9 and S_{10} being negative, the others being positive. The whisky-resources pattern, which has the same random probability, was obtained for only one subject, the difference between eight and one being significant ($p < 0.05$ by 2-tailed binomial test). Other combinations of six S_k 's with equal absolute values including four positives and two negatives all of which have the same random probabilities, were not obtained. In order to check the SO-programme we counted the subjects who fulfilled the following requirements: (a) at least one S_k score belonging to the SO-programme (S_5 or S_6) should have a higher absolute value than the four S_k 's belonging to the 3P-programme, and (b) this score should be positive. No less than 20 subjects met these requirements. For 10 of them, the highest score concerned the O-part (S_5), for three of them it concerned the S-part (S_6), while for seven of them both the O- and S-parts of the SO-programme were standing out equally as illustrated by the example E5 (Table 2). These 20 confirmations of the SO-programme exceed significantly the no more than three cases where an outstanding positive S_k was obtained for the terminal part of the 3P-programme (S_7 and/or S_8), the random probability being nevertheless the same ($\chi^2 = 12.6$, $df = 1$, $p < 0.01$). The contrast is even stronger with the origin part of the 3P-programme (S_9 and S_{10}), where no outstanding positives were observed.

So far, the analysis of data was based on a dichotomization of the six response alternatives into 'same amount of tickets for A and B' (similarity) versus 'different amount of tickets for A and B' (dissimilarity). However, to the extent that the subjects did not use the response alternatives 3 and 6, but 1, 2, 4, and 5, some interesting specifications about the outcomes so far presented may be derived. As almost 74 per cent of the responses belonged to the latter group of alternatives, it was worthwhile to undertake their analysis. However, in that more than 26 per cent of the responses are disregarded, less external validity should be assigned to the outcomes of this analysis than to those of the previous one.

A first specification concerns the S-part of the SO-programme. The analysis of (dis)similarities showed that, at least in replication 2, A and B are expected to get the same amounts of tickets when they claim the same amounts for themselves, and to get different amounts when they claim different amounts for themselves. However, the analysis did not specify whether the amounts A and B are expected to get are the amounts they claim for themselves. For instance, it is possible that subjects expect that the director who is responsible for the distribution of the tickets will reward people who claim small amounts for themselves by giving them high amounts, and that those who claim high amounts for themselves will be put in their proper places and get only small amounts. In order to explore similar possibilities we proceed in the following way.

For every item where one of the response alternatives 1 or 5 is selected, a positive expectation score (+) is assigned to A indicating that the subject expects that A will get a high amount of tickets. In the same way negative expectation scores (−) are assigned to A for the alternatives 2 and 4, indicating that the subject expects A to

get a low amount of tickets. The response alternatives 3 and 6 are scored 0, indicating that the subject did not express any expectation about the amount of tickets that A would get. In this way we obtain a series of 16 +, -, and 0-scores that can be compared with rows of + and - signs in Table 1, in the same way as was done in the analysis of (dis)similarities with the empirical +/ - data patterns. One difference is that when computing S_k scores of agreement, 0-scores should neither be counted as disagreements, nor as agreements, but just be disregarded. Another difference is that we do not need S_k scores relative to rows 5-10 but to rows 1-4. In order to distinguish the present S_k 's from the analysis of (dis)similarities, they will be marked by an accent: S_k' .

A positive S_3' score indicates that subjects expect that the more tickets A claims for himself, the more ones he will get while a negative score would indicate that A will get the opposite of that which he claims for himself. The entire procedure can be repeated for B. The only difference is that now the response alternatives 2 and 5 are coded + while 1 and 4 are coded -, and that instead of an S_3' score one should compute an S_4' score (agreement with row 4). Adding together the S_3' score for A and the S_4' score for B we obtain a *from-self* score. It has a potential range from -32 to +32, a positive score indicating that people are expected to get that which they claim for themselves, while a negative one that they are expected to get the opposite of that which they claim for themselves. The mean *from-self* score, computed over the 48 subjects, amounted to 6.54 and differed significantly from zero ($p < 0.01$ by 2-tailed sign test). Apparently the subjects tended to expect that the amount of tickets a person would get was directly proportional to the amount he claimed for himself.

Computing and adding together the S_2' score for A and the S_1' score for B, we obtained a *from-the-other* score that, if positive, indicates that people are expected to get that which the other claims for them, while if negative, that they are expected to get the opposite of that which the other claims for them. The mean *from-the-other* score amounted to 10.5 being significantly positive ($p < 0.01$ by 2-tailed sign test). Apparently the subjects tended to expect that the amount of tickets a person would get was directly proportional to the amount assigned to him by the other.

Finally, a *for-the-other* score was obtained by adding together the S_1' score for A and the S_2' score for B. If positive, it indicates that people are expected to get themselves that which they claim for the other, while if negative, it indicates that they are expected to get themselves the opposite of that which they claim for the other. Given the positive mean *from-the-other* score (see above) one could expect a negative mean *for-the-other* score. Indeed, if, for instance, A claims a high amount of tickets for B (the other) and B gets them effectively, then less tickets are left for A. The mean *for-the-other* score was indeed negative but amounted only to -1 which was almost zero from which it did not differ significantly. This apparent lack of consistency between the *from-* and *for-the-other* scores may be explained by subjects applying a just world hypothesis (Lerner, 1980). Indeed, it seems to reflect a refusal to accept that prosocial behaviour (ranking the other high) is punished with getting a low amount of tickets, while antisocial behaviour (ranking the other low) would be rewarded with getting a high amount of tickets.

The effects of additional information (item series 2)

The Benny Hill effect that was expected to be produced by additional information consisted of two components: (a) a decrease of the relevance of the SO-programme

and (b) an increase of the relevance of the 3P-programme. Hence, the occurrence of a Benny Hill effect in a subject's responses to item series 2 can be expressed by a single index that is computed as follows:

$$H = I_1 - I_2$$

where H is an index that if positive may reflect a Benny Hill effect, while if negative, an opposite effect.

$$I = S_5 + S_6 - S_7 - S_8 - S_9 - S_{10}$$

I_1 and I_2 are the I -scores for respectively item series 1 and 2.

The mean H for the control condition was 0.38 which is near to zero. In the SAMINFO condition it amounted to -0.38 which is of the same order of magnitude as in the control condition, the difference being not significant and even slightly opposite to the expectation. However, in the DIFFINFO condition it amounted to 11.75 being significantly more positive than in the control condition ($t = 3.12$, $df = 7$, 1-tailed $p < 0.01$) and SAMINFO condition ($t = 3.40$, $df = 15$, 2-tailed $p < 0.01$). Apparently the Benny Hill effect is only produced by additional information that is not the same with respect to A as with respect to B.

A limitation of the H -score is that it suffices that only one component of the Benny Hill effect is realized in order to make the score positive. For instance, a decrease of the relevance of the SO-programme, without compensatory increase of the 3P-programme, may suffice. In order to meet this objection, mean shifts of S_k scores from item series 1 to 2 are presented in the middle part of Table 2. The data show that the high H -score for the DIFFINFO condition corresponds to a full-fledged Benny Hill effect, the S_k 's relative to the SO-programme showing a decrease that is significant for the O-part (S_5) while the S_k 's relative to the 3P-programme show an increase that is significant for the *ter-Aor* part (S_7). Apparently, for item series 2 the subjects did no longer predict that a stimulus person would obtain that which he gets from the other but that which he gets from A. As A is associated with the equity-rule while B with the need-rule, the present outcome suggests that the subjects accorded more predictive power to the equity-rule: they expected that people would get that which they deserve rather than that which they need.

An intriguing outcome is the significant positive shift observed for S_8 in the SAMINFO condition. This result is in line with the hypothesis that substantiating A and B would increase the relevance of the 3P-programme. However, contrary to the hypothesis, it is not accompanied by a decrease of the SO-programme, S_5 remaining constant and S_6 even showing a positive shift opposite to the expectations. In addition, given that in the SAMINFO condition A and B were substantiated in exactly the same way, one could expect a significant positive shift for S_7 as well as for S_8 while the positive shift observed for S_7 is insignificant and even lower than in the control condition. A closer examination of the pretest data showed that the S_8 scores of the subjects who were subsequently put in the SAMINFO condition were exceptionally low. These low scores could not be accounted for by the procedure, the pretest phase being uniform over all conditions. Hence they may be due to chance and the single significant shift in the SAMINFO condition may just reflect a statistical regression effect. Hence we may conclude that, as was suggested yet by the insignificant H -score, there occurred no Benny Hill effect in the SAMINFO condition.

For the sake of completeness, it should be mentioned that, as was done for the present data, scores *from-self*, *from-the-other* and *for-the-other* were also computed for the experimental-test data. They are reported in Willems (1985) and showed largely the same pattern as for the pretest data, which means: outstanding positive *from-self* and *from-the-other* scores, the *for-the-other* scores being near to zero. Consistent with the equity rule and corresponding Benny Hill effect, the outstanding positive *from-self* and *from-the-other* scores were observed in the DIFFINFO condition only for A functioning as 'self' or 'other', while not for B.

The fairness measurement (item series 3)

The data from item series 3 were in high agreement with those from series 2 suggesting that the subjects considered the distributions of tickets they had predicted as fair. There was only one significant difference between item series 2 and 3 and it was moreover unrelated to the use of the SO- and 3P-programmes. It concerned the use of an equality rule (the same amounts for A and B irrespective of their claims) which was reflected by the S_0 score (see above). For item series 3, S_0 amounted to 0.96, which was significantly more positive than in the preceding item series 2 where it amounted to -0.42 ($t = 2.39$, $df = 47$, $p < 0.03$). For item series 1, S_0 was of the same order of magnitude as in series 2 (*viz.* -0.35). The given effect is quite weak and showed up only if data were combined over the three conditions. It may, however, reveal a subjective tendency to associate fairness explicitly with equality.

DISCUSSION

Consistent with hypothesis 1, a significant tendency to use the SO-programme was observed in the pretest. It persisted in the control condition, and even in the SAMINFO condition, where it was not predicted. This suggests that the tendency to use the SO-programme is a pervasive bias that is not readily removed and is in line with the previous study on impression formation (Peeters, 1983) where also the SO-programme was found to be more dominant than expected.

In addition to the SO-bias, the subjects showed a tendency to derive their estimations about the distributions of the tickets in a way consistent with the whisky-drunk rule. This may be a trivial outcome in that it could be produced by subjects expecting that the final distribution will be based on a simple compromise between the propositions made by the stimulus persons, each proposition having the same weight.

Consistent with hypothesis 2, subjects switched from the SO- to the 3P-programme in the DIFFINFO condition. However, inconsistent with the hypothesis, the SO-programme persisted in the SAMINFO condition. The latter result is remarkable in that in the SAMINFO condition A and B were substantiated more by additional information than in the DIFFINFO condition. Indeed, in the former A and B had two arguments to justify their propositions, while in the latter they had only one argument. Apparently mere substantiation of A and B is not sufficient to make subjects use A and B as cognitive anchors. Obviously, it is not the amount of information but the nature of the information by which A and B are substantiated, that determines whether or not a switch from the SO- to the 3P-programme would

occur. One possibility is that in order to activate the 3P-programme, A and B should be differentiated from each other as was the case in the DIFFINFO condition.

Another possibility is that in the SAMINFO condition the substantiation of A and B failed because of the numerous contradictions involved in the additional information. Indeed, in no less than 12 out of the 16 items, the information provided about A was at least partially contradicted by that provided about B in that, for instance, A argued that he (A) had worked hard and needed the tickets, while B denied it. Only the items corresponding to the relational patterns a, g, j, and p were free of such contradictions. However, assuming that the subjects rejected A and B as cognitive anchors because the information provided about them was complicated by the numerous contradictions, then it is not yet clear why they preferred the SO-programme rather than some easy allocation rule such as the *simple compromise* (the whisky-drunk rule) or the *equality-rule* which Debusschere and Van Avermaet (1984) have found is preferred as allocation computations become more complex. Hence, the class of 'easy allocation rules' may have to be extended by the two rules underlain by the cognitive SO-programme which are: (a) *people should get that which an other claims for them*, and (b) *people should get that which they claim for themselves*. The easy character of these rules may follow from a general psychological bias to process information following the SO-programme that may have shown up in the present pretest data as well as in previous data on impression formation (Peeters, 1983) and even in certain presumably universal concepts regarding the 'person' and related semantic categories (Peeters, 1986).

Given the relevance of the present SO-related allocation rules, one could wonder how they may relate to other such rules established by social psychology. McClintock and Van Avermaet (1982) have pointed out that there are two theoretical paradigms to deal with allocation and exchange behaviour: (a) social values (altruism, cooperation, individualism, competition, aggression, etc.) and (b) rules of fairness (equity, equality, etc.). In Peeters (1983) it was shown that the social values belong to the SO-discourse and even correspond to certain well-established categories of implicit personality theory that belong to the SO-discourse as well. Hence the SO-related allocation rules may be argued to belong to the same paradigm as social values and implicit personality theory, the main characteristic of which may be that it is conceptually anchored on the concepts *self* and *other*. As to the rules of fairness, the equity- and need-rules were earlier shown to belong to the 3P-discourse, but the equality-rule was formally unrelated to the 3P- and SO-discourses. Indeed, when formalized as an informational pattern in Table 1, the equality-rule would be represented by a row with only + signs, the rows representing the SO- and 3P-discourses having equal numbers of + and - signs. This suggests that the equality-rule may have a conceptually distinct status of 'third paradigm' next to the SO- and 3P-related ones. As to the simple compromise (the whisky-drunk rule), its status may be indeterminate because subjects may realize the same outcome while thinking in terms of compromises between self and other as while thinking in terms of compromises between 3P-conceived individuals A and B.

CONCLUSION

The main conclusion of this study may be that we do not need Benny Hill in order to produce a Benny Hill effect. Indeed, although people seem to be biased to anchor

social-cognitive representations on the concepts *self* and *other* (SO-programme) rather than on *third-person* related constructs representing individuals (3P-programme), there is hard experimental evidence now that subjects can be made to switch from the SO- to the 3P-programme by providing additional information that makes the 3P-related individuals salient as cognitive anchors. However, further research will be required in order to determine the requirements that should be met by the additional information in order to produce the given switch. Apparently the mere substantiation of stimulus persons as 3P-constructs does not suffice.

Further, when asked to formulate predictions about the outcomes of bargains concerning the division of rewards, subjects who used the SO-programme relied predominantly on an allocation rule stating that 'people may get that which *others* claim for them' and to a lesser extent on a rule stating that 'people may get that which they claim for *themselves*'. When subjects had switched towards the 3P-programme they relied on an equity-rule rather than on a need-rule, both rules, nevertheless, being underlain by the cognitive 3P-programme. To a significant extent, subjects were also found to formulate expectations that were consistent with simple compromises that did not allow for a differentiation between SO- and 3P-programmes. Finally, the subjects seemed not to rely on an equality-rule, although there was some weak evidence that they might associate equality with a fair distribution.

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ZUSAMMENFASSUNG

Das Wortspiel in einem Sketch von der Benny Hill Show stand in Beziehung zu einem Wechsel des Programms der kognitiven Informationsverarbeitung, welche der Interpretation der dargestellten Szene zugrundelag. Die Zuschauer hatten die Tendenz, es entsprechend einem kognitiven Programm zu interpretieren, das an den Konstrukten 'Selbst' und 'Anderer' (SO-Programm) verankert war, während Benny Hill eine Äußerung macht, die ein kognitives Programm erfordern würde, das an Konstrukten verankert ist, die mit dem Pronomen der 3. Person verknüpft sind (3P-Programm). In einem Experiment wurden Vpn veranlaßt, von einem SO- zu einem 3P-Programm zu wechseln (Benny Hill Effekt), wenn sie subjektive Einschätzungen von Verhandlungsergebnissen bezüglich der Verteilung von Belohnungen machen. Die Hypothese wurde bestätigt, daß das 3P-Programm durch zusätzliche Information aktiviert wird, welche die Reizpersonen in einer Weise akzentuiert, die veranlaßt, sie als Anker für die Informationsverarbeitung beizubehalten. Die Daten zeigten jedoch auch, daß eine bloße Akzentuierung der Reizpersonen nicht ausreicht, um den Wechsel der kognitiven Programme zu erreichen. Die Ergebnisse werden im Lichte der Theorien diskutiert, die Gerechtigkeit, soziale Werte und Verteilungsregeln betreffen.

RÉSUMÉ

L'effect 'Benny Hill':

mise en oeuvre de programmes cognitifs qui sous-tendent les estimations subjectives d'issues de négociation à propos de distributions de récompenses

On associe le calembour d'un sketch du spectacle de Benny Hill à la mise en oeuvre de programmes de traitement de l'information cognitive qui sous-tendent l'interprétation de la scène représentée.

Le public serait incité à l'interpréter selon un programme cognitif basé sur les notions *soi et autres* (SO-Program), alors que l'assertion de Benny Hill implique un programme cognitif basé sur des notions liées à la *3ème personne pronominale* (3P-Program). Dans une expérience, on a essayé d'amener les sujets à passer d'un programme SO à un programme 3P (effet Benny Hill), alors qu'ils étaient en train de faire des estimations subjectives sur les résultats de négociations concernant des distributions de récompenses. On a confirmé l'hypothèse que le programme 3P a été activé par l'apport d'une information supplémentaire consistant à faire apparaître les personnes stimuli comme des points centraux du traitement de l'information. Cependant les résultats montrent que cette procédure à elle seule n'est pas suffisante pour produire le changement de programme cognitif attendu. Les résultats sont discutés à la lumière de théories concernant l'équité, les valeurs sociales et les règles de distribution.