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Selective exposure and the false consensus effect: The availability of similar and dissimilar others

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Selective exposure to a biased sample of others is supposed to play an important role in explaining the false consensus effect (FCE). Selective exposure is generally assessed by asking subjects to estimate the prevalence of certain behaviours among their friends. We argue that this measure may easily lead to erroneous conclusions about the mediating role of friends' positions, since subjects are also likely to overestimate the prevalence of their own responses in a sample of friends. In the present study a process tracing task was used in which subjects were asked to think aloud when estimating the prevalence of specific opinions about 20 issues. Three predictions were tested. First, subjects were expected to refer to similar others more often than to dissimilar others. Second, referring to similar others was expected to lead to larger FCEs. Third, referring to dissimilar others was expected to lead to smaller FCEs. Results provided direct evidence of selective exposure, but this was most pronounced for issues for which opinions were relatively heterogeneous, i.e. for which there was no clear majority or minority opinion. The availability of similar others was further shown to be associated with larger FCEs, whereas the availability of dissimilar others was associated with smaller FCEs.

A well-documented bias in social perception is the 'false consensus effect'. Ross, Greene & House (1977) described the effect as 'the tendency to see one's own behavioral choices and judgments as relatively common and appropriate to existing circumstances while viewing alternative responses as uncommon, deviant and inappropriate' (p. 280). It should be noted that the false consensus effect (FCE) is a *relative* effect: i.e. endorsers of a certain position do not necessarily overestimate the *actual* number of others who endorse their position in a specific population. They will, however, give higher estimates than people who have a different position.

Numerous explanations of the FCE have been suggested. As Marks & Miller (1987, p. 72) note: 'In fact, there are almost as many explanations of the effects as there are empirical studies of the phenomena'. They classify these explanations into four categories: (a) selective exposure and cognitive availability; (b) salience and focus of attention; (c) logical information processing; and (d) motivation (see Marks & Miller, 1987, for an extensive review of these explanations). Among these explanations, Marks & Miller consider selective exposure to similar others as the strongest contributor to the FCE, as illustrated by the following: 'Despite the absence of data delineating the complete mediating process, we believe

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that selective exposure is the primary factor generating misperceptions of the commonest of one's preferred positions. We judge the numerous other variables that affect attribution of similarity to be less fundamental in accounting for whether the bias occurs' (p. 77).

The main aim of the present study is to investigate further this explanation of the FCE and to provide direct evidence concerning the extent to which the availability of positions of others mediates consensus estimation. People tend to associate with 'similar' others (see, for example, Eiser, Morgan, Gammage, Brooks & Kirby, 1991; McAllister, Perry & Maccoby, 1979) and impressions of these others are readily available in memory (cf. Tversky & Kahneman, 1973). Ross *et al.* (1977) also suggested that instances of similarity or agreement are more readily accessed from memory than instances of dissimilarity or disagreement. The availability of this information leads us to overestimate the prevalence of our own responses in a broader population (see also Marks & Duval, 1991). Support for a selective exposure explanation of the FCE is provided by only two studies. First, Sherman, Presson, Chassin, Cotty & Olshavsky (1983) found positive correlations between adolescents' prevalence estimates of cigarette smoking and the number of their friends who smoked. These authors also found a stronger FCE for social environments where there was less intermingling between smokers and non-smokers, i.e. more selective exposure. Deutsch (1988) obtained false consensus effects in a population of college students only for those issues for which FCEs were shown in estimates for subjects' 10 best friends.

In these two studies, subjects were asked to give population estimates and to indicate the number among their five closest friends that smoked (Sherman *et al.*, 1983) or to estimate the percentage of their 10 best study friends holding a certain position (Deutsch, 1988). The methods employed in these studies, however, may have some drawbacks. First, a possible limitation of the study by Sherman *et al.* (1983) is that it focused on only one behavioural issue (smoking) and revealed an FCE for one specific group only (adolescents). Furthermore, their findings did not show a correlation between friends' smoking behaviours and consensus estimates for adult smokers. It needs to be added that Suls, Wan & Sanders (1988) found that smoking was the *only* issue out of 12 health-related behaviours not showing a significant FCE. Results obtained by Bosveld, Koomen & van der Pligt (1992) even showed a reversal of the FCE (i.e. a *false uniqueness effect*, see also Mullen, Dovidio, Johnson & Cooper, 1992) with respect to smoking behaviour. Thus, although there is some evidence of selective exposure as a factor affecting the FCE in this study, replications using a broader range of issues seem necessary.

A second limitation concerns the method employed by Deutsch (1988). Her findings showed that FCEs for a larger population were obtained only for those issues for which subjects relatively overestimated the prevalence of their own choice in a group of 10 friends. Issues for which friends were not perceived as relatively similar did not result in an FCE. One could argue, however, that the relation between estimated positions of friends and population estimates may have been the result of a general tendency to overestimate the number of similar others (in *both* small groups of friends *and* larger populations), and *not* the result of a generalization of the positions of friends. An example will illustrate this point. In a previous study (van der Pligt & van Schie, 1989), we asked subjects for their own position on the issue of 'increasing the governmental budget to stimulate women re-entering the job market'. Subjects were also asked the number of friends for and against this measure and to estimate the percentage of Dutch students in favour

of this measure. Results showed that subjects' own position correlated positively with both the estimate for Dutch students and with the positions ascribed to friends. Friends' positions also correlated with the estimates. Thus, it seems that friends' positions affected the estimates, supporting the selective exposure explanation. However, it does not seem very likely that subjects had much knowledge about their friends' positions on this rather specific issue, and a more parsimonious interpretation of these findings may be that subjects simply showed two related FCEs, one for their friends and one for the larger in-group. To test this, we partialled out subjects' own position. As a consequence, the relation between ascribed friends' positions and consensus estimates decreased to a non-significant level, indicating that the correlation between friends' positions and consensus estimates was fully dependent upon own position of subjects. Thus, these findings seem best explained as the result of two related FCEs.

In summary, the above discussion suggests that one of the weaknesses of research on selective exposure is that reports on friends' positions may be based on guessing and affected by the same factor(s) that result in false consensus effects. It can be inferred from our example that correlations between own position and consensus estimates may be high when knowledge of the actual population distribution is lacking (see also Dawes, 1989, 1990) and this may also be the case for the correlation between own position and estimated positions of friends. Strictly speaking, however, these two positive correlations do not provide evidence for the mediating role of selective exposure.

Since any task in which subjects are asked for friends' positions will raise the problems mentioned earlier, subjects in the present study were first asked to think aloud about how Dutch students thought about each of 20 issues. When others (friends, fellow students or acquaintances) were referred to in this thinking-aloud task, these responses were later classified as similar or dissimilar to subjects' own position on each of the 20 issues. After a filler task, subjects were then asked to estimate the percentage of Dutch students that had a specific opinion about each of the issues and for their own position on each of these issues.

Together, the present design enabled us to study in more detail the processes underlying the selective exposure explanation of the false consensus effect. The first assumption is that people tend to associate with similar others (Marks & Miller, 1987; Sherman *et al.*, 1983). On the basis of this assumption we expected subjects to refer to similar others more often than to dissimilar others in the thinking-aloud task. The second assumption in the selective exposure explanation holds that positions of others are utilized in the estimation process. Thus when others, mentioned by subjects, have positions similar to subjects' own position, generalization of these positions to a broader population will increase the FCE. Finally, as Dawes (1990) suggested earlier, subjects may also use other information relevant for the consensus estimation task. Consequently, we expect dissimilar others, mentioned in the thinking-aloud task, to be associated with a decrease of the false consensus effect.

Method

Subjects

Twenty-six subjects, all first-year psychology students at the University of Amsterdam, participated in partial fulfilment of their introductory courses.

Design

Subjects were asked to think aloud about the opinions of Dutch students on 20 issues. Responses were tape-recorded. After a filler task, subjects were asked to estimate the percentage of Dutch students that liked each of the objects or target stimuli. Finally, for each issue subjects were asked for their own position.

Procedure

Subjects participated in individual sessions. Interviewers were five students who were participating in a research course. Subjects were told that the aim of the research was to study how people form ideas about what others think. Subjects were asked to think aloud when answering the questions; their answers were tape-recorded. Three warm-up questions were asked, which were also recorded. Then subjects were asked questions about 20 issues, varying in degree of generality. For example, they were asked for estimates concerning *modern painters*, but also estimates concerning *Karel Appel*. Another general issue was *classical music*, of which the more specific counterpart was *Chopin*. Piloting revealed that, on average, subjects reported more knowledge of friends' positions on general compared to specific issues.¹ For each of the 20 issues, subjects were asked to think aloud in answering the question of how Dutch students thought about this issue. Next, they were asked on what they based this answer.²

After this first task a paper-and-pencil filler task followed in which own position and estimates were asked on 16 political issues. For this task the percentage of others pro, neutral and anti each issue was asked, making this task relatively difficult and distracting. Then a second paper-and-pencil task followed in which subjects were asked to estimate in percentages how Dutch students thought about each experimental issue; for example: 'What percentage of Dutch students likes classical music?' Finally, subjects were asked for their own preference, for example: 'Do you like classical music?' (yes/no).

Measures

The taped responses were coded using three categories: *similar others mentioned*, *dissimilar others mentioned*, and *no others mentioned*. Others included friends, fellow students or acquaintances. Some examples derived from the recordings will make clear in what way subjects referred to others: 'I happen to know some people that ...', 'I base my answer on experiences with friends ...', 'Here, I have a clear picture of one of my friends ...'.

If others were referred to, coders made a note of this, and subjects' own preference on the issue was used to categorize the others mentioned as 'similar' or as 'dissimilar'. For example, when a subject referred to others who liked classical music, but the subject did not like classical music him/herself, this response was categorized as *dissimilar others mentioned*. Protocols were coded independently. Responses from each subject were coded by two interviewers who had not interviewed the subject. In the case of differing codings, coders were asked to reach a consensus. Next, the first author coded a random sample of the responses of 10 subjects. These scores were compared to the codings of the two coders, resulting in 92 per cent agreement. Similarly to Campbell (1986) and Spears & Manstead (1990) FCE scores were computed at an individual level. For example, a person (X) who approves of modern painters might estimate that 70 per cent of others might also approve of modern painters. Suppose that, on average, those disapproving of modern painters estimated that only 40 per cent approve of modern painters. The FCE for person X would be $70 - 40 = 30$ per cent.

Results

Consensus estimates for each of the issues are reported in Table 1. For every issue, subjects relatively overestimated the percentage of other students with a position similar to their

¹ On the basis of a pilot study, in which subjects reported more knowledge of others' positions on general compared to specific issues, we expected subjects to refer to others more often for general issues. The present analyses revealed, however, that generality of issues was considerably confounded with skewness of issues (see Table 1). As a consequence, effects of generality of issues are ignored in the present analyses.

² Only results for the prompted responses will be reported. Although results for the immediate responses were in general in a direction similar to the results for the prompted responses, merely asking subjects to verbalize their thoughts did evoke fewer responses than asking them on what they based their answer.

Table 1. Estimated percentage of Dutch students with favourable positions as a function of own position (favourable vs. not favourable)

Issues	Own position		Own position	
	Favourable		Not favourable	
	%	(N)	%	(N)
1. Fish	60.24	(21)	52.00	(5)
2. Films on TV	75.96	(23)	65.00	(3)
3. Books ^a	68.95	(25)	40.00	(1)
4. Sports on TV	58.13	(8)	44.72*	(18)
5. Pets	66.19	(21)	50.00	(5)
6. Foreign dishes ^a	72.81	(26)	—	(0)
7. Classical music	40.05	(21)	29.00	(5)
8. Modern painters	50.95	(21)	26.00*	(5)
9. Health food	47.63	(19)	32.14*	(7)
10. Cabaret	60.53	(19)	33.57**	(7)
11. Herring	57.29	(14)	56.67	(12)
12. Westerns on TV	47.50	(8)	32.78*	(18)
13. Jan Wolkers ^b	52.50	(10)	47.19*	(16)
14. Tennis on TV	41.89	(9)	38.53	(17)
15. Cats	60.31	(16)	36.50**	(10)
16. Chop suey	57.63	(19)	47.86	(7)
17. Chopin	37.19	(16)	25.10*	(10)
18. Karel Appel	55.29	(17)	26.11**	(9)
19. Wholemeal bread ^a	75.12	(25)	20.00**	(1)
20. Seth Gaaikema ^b	60.00	(3)	27.21*	(23)

* $p < .05$; ** $p < .01$.^a Issues that were deleted from the analyses.^b Jan Wolkers is a Dutch writer; Seth Gaaikema is a Dutch comedian.

own position and for 11 issues estimates revealed a significant FCE. Three issues were deleted from further analyses because the distributions were too skewed.

We then tested the selective exposure hypothesis, predicting that subjects will refer to similar others more often than dissimilar others. Across issues, differences between the frequencies of mentioning similar versus dissimilar others indicated selective exposure. Similar others were referred to in 32 per cent of the responses, whereas dissimilar others were referred to in 17 per cent of the responses ($\chi^2(24) = 3.77, p < .01$).

Although this finding is in the predicted direction, a closer look at the distributions of issues in Table 1 may indicate a possible confounding of these results with the distributions of issues. As Table 1 shows, for 11 issues (1, 2, 4, 5, 7, 8, 9, 10, 12, 16, 20), at least 70 per cent of the subjects held a similar position. As a result of these skewed distributions, one may expect the chance of meeting a person belonging to the majority to be greater than the chance of meeting a person belonging to the minority. Thus, for these issues subjects from the majority may actually have been exposed predominantly to others holding a similar position, whereas subjects in the minority had a greater chance of meeting peers with a position dissimilar to their own position. For six other issues (11,

13, 14, 15, 17, 18), the distributions were less skewed, varying from a majority of 54 per cent to a majority of 65 per cent. For these issues, the chance of meeting someone from the majority should be smaller than for the first set of issues. Thus, for the first set of issues one may expect subjects in the majority to report more similar others compared with subjects in the minority, whereas subjects in the minority may be expected to report more dissimilar others compared with subjects in the majority. For the second set of issues the pattern of reporting similar and dissimilar others was expected to be more symmetrical for subjects holding different positions. In order to check these patterns and to investigate selective exposure, analyses were performed within both sets of issues. For the first set of issues, subjects tended to refer to dissimilar others more often when they were part of the minority than when they were part of the majority (see Table 2) ($t(15) = 1.58$, $p = .08$).³

Table 2. Proportions of responses in which similar and dissimilar others were mentioned as a function of own position for issues with skewed distributions

Subjects' position	Others referred to	
	Similar	Dissimilar
Majority	.40	.17
Minority	.13	.25

Similarly, for these issues, when subjects were part of the majority they referred to similar others more often than when they were part of the minority ($t(15) = 2.32$, $p < .05$). Thus, as argued before, the skewness of distributions strongly affected subjects' tendency to refer to similar or dissimilar others. Next, references to similar and dissimilar others were analysed for the second set of issues. As expected, no differences were found for these issues in referring to similar and dissimilar others as a function of own position. As Table 3 shows, own position did not affect the proportion of responses in which similar others were mentioned ($t(13) = .08$, n.s.), which was also the case for the number of times dissimilar others were mentioned ($t(13) = .19$, n.s.).

Although, at least for the first set of issues, these results appear to indicate that subjects report similar or dissimilar others as a function of the chance of meeting someone with a majority position, two findings may still point to selective exposure. First, others with a majority position were referred to more often when subjects were part of the majority (40 per cent) than when they were in the minority (25 per cent), as indicated by a marginally

³ Since no comparison can be made for subjects who are always part of the majority (or part of the minority), these subjects are deleted from these tests. The same argument holds for mentioning similar, dissimilar or no others. Subjects who never mentioned (dis)similar others, or always mentioned (dis)similar others, were deleted from the analyses. Further, although analyses of variance may seem more appropriate, these tests do not apply to the present design. This is because subjects' positions vary across issues (see also Spears & Manstead, 1990, who refer to this problem in comparing FCEs across issues). Therefore, (one-tailed) paired t tests are used to test predictions.

significant t value ($t(9) = 1.38, p = .10$). Thus, subjects' reports of positions of others went beyond the statistical chance of meeting a person belonging to the majority; subjects in the minority reported *fewer* dissimilar others, i.e. persons from the majority, compared to similar others, mentioned by subjects in the majority. This indicates that, although subjects in the majority and subjects in the minority in general largely shared their direct social environment, they still tended to share their likes and dislikes with relevant others referred to. Further, as Table 3 shows, for the six issues with less skewed distributions, across positions, similar others were mentioned more often than dissimilar others ($t(23) = 2.04, p < .05$), indicating that for these issues more similar, compared to dissimilar, others were available to subjects. In summary, for issues with skewed distributions, subjects' responses were strongly affected by the actual distribution of responses; subjects in the minority referred more often to dissimilar others whereas subjects in the majority referred more often to similar others. For issues with a less skewed distribution, this asymmetry was not found. Overall, findings provide evidence for selective exposure, especially for issues with less skewed distributions.

Table 3. Proportions of responses in which similar and dissimilar others were mentioned as a function of own position for issues with less skewed distributions

Subjects' position	Others referred to	
	Similar	Dissimilar
Like	.26	.19
Not like	.27	.15

Next, we turned to the impact of availability on consensus estimates. Does the availability of similar others relate to larger FCEs and the availability of dissimilar others to smaller FCEs? For the set of issues with skewed distributions, we found that when subjects referred to similar others they showed to a mean FCE of 22.81 per cent, whereas the average FCE was 15.76 per cent when no others were referred to ($t(15) = 1.52, p = .07$).³ Subjects' responses in which dissimilar others were mentioned related to an average FCE of 8.51 per cent, whereas the average FCE for issues for which subjects did not refer to others was 18.15 per cent ($t(18) = 1.94, p < .05$). Although these results confirm the prediction that the availability of positions of others relates to consensus estimates, there may have been a confounding with subjects' positions on the issues, since both majority and minority positions were used in these analyses and since mentioning similar and dissimilar others was correlated with own position of subjects (at least for these issues with skewed distributions). Therefore a second analysis was performed in which subjects' positions were held constant. Since the analyses for minority positions left us with too few subjects, analyses were only performed within the majority. This revealed a pattern similar to the results for the total sample. Referring to similar others was related to an average FCE of 22.45 per cent, whereas the average FCE for issues in which no others were referred to was 14.99 per cent ($t(15) = 1.58, p = .07$). Similarly, when dissimilar others were mentioned the average FCE was 6.57 per cent, whereas it was 18.04 per cent when no others were referred to ($t(15) = 2.32, p < .05$).

Finally, we tested these predictions within the six issues for which distributions were less skewed. These analyses revealed that referring to similar others related to an average FCE of 20.51 per cent, whereas for these subjects the average FCE was 15.30 per cent when no others were referred to ($t(9) < 1$, n.s.). Finally, referring to dissimilar others was related to an average FCE of .96 per cent, whereas these subjects' estimates showed an average FCE of 14.72 per cent when no others were referred to ($t(11) = 2.39$, $p < .05$).

Discussion

The main aim of the present study was to show in more detail the relationship between the availability of positions of relevant others and consensus estimates. The selective exposure account of the FCE suggests that relatively high estimates for the number of others in a population with a position similar to one's own position may be (partly) the result of the availability of positions of friends or known others. The general argument holds that, when asked for consensus estimates for a broader population, people retrieve from memory positions of relevant others. Further, these positions are relatively similar to their own position, and generalization of these positions relates to relatively high estimates of the number of people within the larger population holding a position similar to one's own position. The present study dealt with this explanation in more detail by asking subjects to think aloud about how a larger population of students thought about each of 20 issues and by relating others mentioned in this task to consensus estimates. This method enabled us to study whether subjects actually refer to others in the estimation process. As was mentioned in the introduction, methods in which subjects are asked to report friends' positions do not provide a direct test of whether friends' positions are actually utilized in the estimation process. Subjects will generally answer questions about their friends' positions, and, as was argued before, a positive relation between this measure and general consensus estimates does not indicate a direct relationship between these factors *per se*.

Our results can be divided in two sections. First, although across subjects evidence existed for subjects referring to similar others more often than to dissimilar others, indicating selective exposure, these findings were shown to be confounded with actual distributions in this sample. When the distribution of opinions about an issue was skewed, i.e. when the majority consisted of at least 70 per cent of the subjects, results showed that majority subjects generally referred to similar others, whereas subjects in the minority referred to dissimilar friends more frequently. This can be considered the result of a similar social environment for both categories of subjects. Thus, both subjects in the majority and subjects in the minority can be assumed to be exposed to others from the majority more often than to others from the minority. As the result of this 'exposure to the majority' subjects in the majority were exposed to relatively many similar others and relatively few dissimilar others. Subjects in the minority, on the other hand, were exposed to relatively few similar others and relatively many dissimilar others in their direct social environment. For issues with less skewed distributions, this asymmetry was not found. For these issues, both subjects liking and subjects not liking the issues reported more similar than dissimilar others, indicating selective exposure. As was reported earlier, evidence of selective exposure also existed in subjects' reports of others for issues with

skewed distributions. For these issues subjects in the minority referred to dissimilar others less frequently than subjects in the majority referred to similar others, indicating that, beside the strong impact of their shared social environment, subjects still reported similar positions more often relative to dissimilar positions. Thus, even within this homogeneous population of first year students, subjects tend to cluster on the basis of their preferences. In more general and heterogeneous populations this tendency to cluster on the basis of preferences, attitudes or behaviours may be much stronger compared to the specific and homogeneous sample used in the present study. For these populations, exposure actually will be 'selective', thus perceptions of consensus in broader populations will be less prone to the effects of a shared social environment, suggesting that effects of selective exposure on consensus estimates may increase for populations that are more heterogeneous.

In the second section of the results effects of the availability of others on the FCE were studied. Overall, positions of others were shown to affect consensus estimates. It needs to be added that, although most analyses were performed within subsamples of subjects and issues, leading to a reduction of statistical power, results clearly indicated that mentioning similar others related to larger FCEs. The availability of dissimilar others, on the other hand, related to smaller FCEs. Thus, although there was not a strong selective exposure in the present study, the method used enabled us to isolate this factor as a determinant in the actual process of generalization. More generally, the present findings indicate, as was suggested earlier by Dawes (1989, 1990), that people treat sample information incongruent with their own standpoint similarly to information that is congruent with this standpoint. When similar others were available, perceived consensus for the own position increased, whereas, when dissimilar others were available this consensus decreased.

A possible competing explanation of our findings may be that subjects remembered their responses and that consensus estimates were made consistent with these responses. Two arguments plead against this interpretation. First, a filler task was used in which subjects were asked for their own position and consensus estimates relating to 16 political issues, which was intended to draw their attention away from their initial responses. Second, subjects responded to 20 experimental issues, which suggests that it may have been very difficult to remember exactly their actual responses in the thinking-aloud task.

In summary, the use of a thinking-aloud task enabled us to look in more detail at the process of consensus estimation, and especially to study the role of the availability of others' positions. Whereas our analyses were restricted to this explanation, and did not test the contribution of other factors mentioned in the introduction, we suggest that thinking-aloud procedures may also reveal the contribution of a number of these other factors underlying the tendency to perceive our own actions as relatively common.

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