Abstract

We examined the effect of deliberate mimicry on eliciting (accurate) information and cues to deceit. Mimicry is considered to facilitate cooperation and compliance in truth tellers, whereas liars are constrained to provide detail.We therefore expected truth tellers to be more detailed than liars, particularlyafter being mimicked. A total of 165 participants told the truth or lied about a meeting they attended. During the interview, half of the participants were mimicked by the interviewer. Truth tellers were more detailed than liars, but only in the mimicry present condition. Truth tellers also gave more accurate detail than liars, and the difference was most pronounced in the mimicry present condition. Mimicry as a tool for eliciting information and cues to deceit fits well with the emerging 'interviewing to detect deception' literature, particularly in the 'encouraging interviewees to say more' approach.

Mimicry and investigative interviewing:

Using deliberate mimicry to elicit information and cues to deceit

In the last decade researchers have started to examine ways to elicit verbal cues to deceit during interviews (Vrij&Granhag, 2012). Techniques that research has shown to elicit such cues include: making the interview more cognitively demanding, which results in liars providing fewer details than truth tellers (Evans, Michael, Meissner, & Brandon, 2013; Vrij et al., 2008); asking unanticipated questions, which results in liars being less detailed and less consistent in their answers than truth tellers (RoosafHjelmsäter, Öhman, Granhag, &Vrij, 2014; Vrij et al., 2009), and the strategic use of evidence, which highlights in liars inconsistencies between statements and evidence or inconsistencies within statements (Hartwig, Granhag, Strömwall, &Kronkvist, 2006; Granhag, Strömwall, Willén, &Hartwig, 2013). A fourth technique to elicit cues to deceit is encouraging interviewees to say more, which results in less detailed and less plausible answers from liars compared to truth tellers (Leal, Vrij, Warmelink, Vernham, & Fisher, in press; Mann et al., 2013). The latter technique, encouraging interviewees to say more, links particularly well with the core principles of interviewing: to obtain as much information as possible (Bull, 2010; Fisher, 2010; Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007).Therefore, any (ethical) strategy that encourages interviewees to say more is valuable. The relationship between interviewer and interviewee can affect how much information is yielded in forensic interviews (Vallano& Compo, 2011; Walsh & Bull, 2012). The present study examines whether deliberate mimicry, a method to enhance the relationship between interviewer and interviewee, encourages interviewees to say more and thereby magnify differences between truth tellers and liars in terms of detail they offer.

People often automatically (and unconsciously) mimic the behaviour of their interaction partners, as seeing someone behave in a particular way activates a behavioural representation, causing the perceiver to adopt the exhibited behaviour (for a review, see Chartrand and Bargh, 1999). Mimicry may have evolved to serve a social function by fostering relationships (Lakin, Jefferis, Cheng, &Chartrand, 2003). Humans have a fundamental need to belong and affiliate (Baumeister& Leary, 1995) and mimicry is conceived as a strategy for facilitating affiliation, a sort of 'social glue' (Lakin et al., 2003). When two interaction partners share an embodied state, they are likely to activate the same cognitions and affective states (Barsalou, Niedenthal, Barbey, &Ruppert, 2003). This shared mental state creates in both the mimicker and the perceiver enhanced feelings of empathy and rapport (Chartrand&Bargh, 1999; Stel, van Baaren, &Vonk, 2008; Lakin&Chartrand, 2003).

There is also evidence to suggest that *deliberate* mimicry of another person's nonverbal behaviour can benefit social interaction. In Chartrand and Bargh (1999) participants completed a task with a confederate. In the experimental condition, the confederate deliberately mimicked participants' mannerisms, and in the control condition the confederate displayed neutral mannerisms. Participants who were mimicked reported liking the confederate more, and felt that their interaction had been more smooth and harmonious.

Research also suggests that deliberate mimicry can promote pro-social behaviour and compliance, which would be of great benefit in forensic interviews. Regarding pro-social behaviour, Van Baaren, Holland, Steenaert, and Van Knippenberg (2003) instructed a waitress to mimic the verbal behaviour of her customers, simply by repeating back their order. Over two studies, the findings revealed that customers in the mimicry condition tipped more often, and gave significantly larger amounts compared to customers in the non-mimicry condition. Similarly, in Van Baaren, Holland, Kwakami, and Van Knippenberg (2004), participants first completed an unrelated task during which the participants' posture and body

orientation was or was not mimicked by an experimenter. The experimenter then "accidentally" dropped six pens when walking past the participant. Mimicked participants helped the experimenter pick up the pens on every occasion compared to only a third in the non-mimicry condition.

With regard to compliance, Fischer-Lokou, Martin, Guéguen and Lamy (2011) instructed confederates to ask pedestrians for directions. In the experimental condition, the confederates mimicked the pedestrians' verbal and nonverbal behaviour, whereas in the control condition no mimicry occurred. The mimicked pedestrians complied more with an additional request for money and gave significantly more than the pedestrians in the control group. Similar findings were obtained in another study of deliberate mimicry and compliance (Guéguen, Martin, &Meineri, 2011). Participants were either mimicked or not by a confederate while discussing painting photography. After the discussion, the confederate approached the participant about help with an essay, adding a time constraint. In the mimicry condition, 76% of the participants complied with the confederate's request compared to 46% in the non-mimicry condition. Note that the request for help in these two compliance studies was explicit rather than implicit (the participants were asked directly rather than having to act spontaneously), which is comparable to an interviewer requesting information during an interview.

Perhaps more comparable to the realm of investigative interviewing is a study conducted by Maddux, Mullen and Galins (2008). In study 1, business school students enrolled in a negotiation class were placed into a dyad, and engaged in a mock employment negotiation. In half of the negotiations, one member of the dyad was instructed to mimic their opponent; in the other half, no mimicry occurred. Mimicry facilitated negotiations, yielding greater joint gains compared to dyads in the non-mimicry condition. In study two, the experimenter employed the same methodology, but made it more difficult for each pair to

come to an agreement. Again, mimicry facilitated cooperation, helping negotiators to establish compatible interests and increased the likelihood of obtaining a deal.

In the light of the above, deliberate mimicry may enhance cooperation during interviews. In (police) interview settings, cooperation is typically defined as a willingness to give answers of any significance (Baldwin, 2003; Vrij, 2003). One could argue that cooperation could be further operationalised and that the more detail an interviewee volunteers, the more cooperative s/he appears to be. Truth tellers typically volunteer more detail than liars (Masip, Sporer, Garrido, &Herrero, 2005; Vrij, 2005, 2008), as liars have some constraints. They may be reluctant to be detailed as they run the risk that such detail can be falsified by an investigator (Hartwig, Granhag, &Strömwall, 2007; Masip&Ces, 2011; Nahari, Vrij, & Fisher, 2012, in press) and they may lack the imagination to conjure up details that sound plausible (Köhnken, 1996, 2004; Leal, Vrij, Warmelink, Vernham, & Fisher, in press). Liars may also want to limit the amount of false information they provide so that they have less false information to remember in case they are interviewed again (Vrij, 2008). If deliberate mimicry encourages interviewees to cooperate, it could magnify the differences between truth tellers and liars in terms of detail, as reluctance to be detailed and lack of imagination makes it less likely that liars will add detail compared to truth tellers. We therefore hypothesised that the difference between truth tellers and liars in reporting detail will be more pronounced in the mimicry present than in the mimicry absent condition (Hypothesis 1).

Given that mimicry can increase levels of cooperation and compliance, it is interesting to examine whether mimicry would also result in liars volunteering more accurate information. This is an important question often ignored in deception research, which mainly focuses on 'cues to deceit'. This focus differs from the aim of an investigative interview which is to elicit accurate information from an interviewee (Bull, 2010; Fisher, 2010). Liars

rarely make up entire stories but typically embed their lies in truthful stories (Leins, Fisher, & Ross, 2013; Vrij, 2008), which means that also liars provide accurate information. It is therefore relevant to examine whether certain interview techniques encourage liars to provide more accurate information. It is thereby also important to know if thattechnique does not encourage liars to provide more inaccurate information.We explored this in the present experiment. Truth tellers were instructed to say nothing but the truth. Liars were instructed to give a mixture of false and accurate information, whereby the amount of accurate information they volunteered was up to them. The constraints mentioned above (liars' reluctance to provide too many false details and lack of imagination) refer to providing false information, but not to providing accurate information, and liars, like truth tellers, could provide additional accurate information if they wish to do so.

Mimicry requires concentration and cognitive effort and an interviewer may lack mental resources for this as he or she has to focus on the interview (Patterson, 1995). In the present study, we therefore adopted a two-interviewer protocol, with one speaking interviewer and one silent interviewer, with the silent speaker carrying out the mimicking. In many countries police frequently conduct suspect interviews in pairs. For example, a survey amongst UK police officers revealed that 68% of interviews with juvenile suspects are conducted with more than one investigator present in the room (Sim& Lamb, 2012). In addition, suspect interviews in human intelligence settings are also frequently carried out with two interviewers present (Soufan, 2011). An experienced UK police interviewerinformed us that typically one interviewer does the talking whilst the second interviewer mostly remains silent, sometimes taking notes. We acknowledge that such practice varies considerably from country to country. For example, in Belgium the second interviewer types what is being said. Research papers on using pairs of interviewers, carried out in a non-police context, cite three advantages of this technique (Huber & Power, 1985;

Kincaid & Bright, 1957). First, it is efficient as one interviewer can engage in conversation while the other can concentrate on recording answers accurately and completely. Second, when the interview becomes unstructured or when the first interviewer vigorously pursues one train of thought, a second interviewer can pick up on points missed by the first interviewer. Third, when analysing the interviews, the second interviewer can aid the recall of the first.

Method

Design

A 2 (Veracity: truth vs lie) X 2 (Mimicry: absent vs present) between-subjects design was used with two dependent variables: (i) the frequency of visual, spatial, temporal, action and auditory details in participants' responses, and (ii) the frequency of accurate details volunteered by participants.

Participants

A total of 165 participants (58 males and 107 females) took part in the study. The sample was made up of undergraduate students ($N = 144$), university staff ($N = 18$), and members of the general public ($N = 3$). The average age was $M = 22.56$ years ($SD = 6.64$).

Procedure

Participants were recruited via posters, leaflets, and online advertisements on the University's staff and student portals. An advert was also placed in a local newspaper. Participants were invited to play the role of a secret agent, attending a meeting and then an interview. The advert provided contact details and offered a £5 reward to those who were convincing in the interview.

After arriving at the Psychology Department, the participant was greeted by the experimenter and signed an informed consent form before being briefed on their task. At this stage, all participants received the same instructions:

Today you are going to play the role of a junior member of an intelligence agency known as 'HMI'. You will attend a secret meeting with three senior members of HMI. The focus of the meeting is to decide on the most suitable location to plant a spy device, and you will be required to vote on which location you think is best to host the device. The device will be used to track a target, someone of great interest to HMI. The meeting will also involve some discussion of the device.

It is *essential* that you remember all the details of the meeting, as it will be your job to inform someone else later on. Given the sensitive nature of the information, you won't be able to make notes.

In addition, the experimenter instructed the participant not to introduce him/herself or interject during the meeting, and to return to the current location after the meeting has finished.

The meeting. The meeting took place in a small room which contained a table, four chairs, presentation materials (a laptop and a projector) and three confederates. The purpose of the meeting was to vote on a suitable location to plant a spy device, and included a visual presentation of the following details: the background of the three members other than the participant (confederates) present at the meeting; the spy device and its physical and technical features; and the shortlisted locations suitable to host the device, including floor plans and details on suitability. Before the third and final location (a hotel reception) was presented, a scheduled interjection (notification of time constraints) by a confederate triggered a vote on which location should host the device. The outcome of this vote was pre-determined, and the participant's vote could not affect the result as they would always be outvoted (3 to 1 if they

disagreed with the other three members, or the decision would be unanimous if they agreed with the other three members).

The participant then returned to the room where s/he started the experiment. It was at this stage that all participants were randomly assigned to a veracity condition, either truth tellers ($N = 82$) or liars ($N = 83$). Prior to being interviewed, the truth tellers were informed that a sister organisation, HMR, was aware of the meeting they had attended. HMR knows HMI's target and have been pursuing this person for some time. As a result, HMR want to work with HMI in a joint operation. Truth tellers were therefore instructed to have an interview with HMR and volunteer information about the meeting's content. They were told that their task is to cooperate fully with the interviewers and to volunteer all the information they ask for. In addition, the experimenter informed the truth tellers that they would receive £5 as a reward if they managed to convince the HMR interviewers that they were telling the truth and cooperative. Alternatively, if they failed to convince the interviewers, they would have to write a report about the meeting instead. All participants in this experiment, truth tellers and liars, received the £5 for taking part, and no one had to write a report. Finally, before being led to the interview room, truth tellers completed a 'Pre-Interview Questionnaire' which measured how motivated they were to perform well in the interview. This was measured on a 5-point scale ranging from [1] 'Not at all motivated' to [5] 'Very motivated'.

On returning from the meeting, the liars were first informed that a foreign intelligence agency, 'EFA', was aware of the meeting they had attended. To prevent an investigation into HMI, liars were told that they must now meet with EFA and do their upmost to convince the EFA interviewers that they are telling the truth and cooperative. The liars' task required them to provide a mixture of truthful and false information. The truthful information, it was argued, would help convince EFA that they are being cooperative. Therefore, liars were first

instructed to be completely honest about the room where the meeting took place, and the location that did not win the vote. Second, they were told that they must be completely dishonest about the location that did win the vote. In all cases, liars were instructed to say that the Hotel Reception was the location selected to host the device, and make up the following details: a floor plan, one reason why it is a suitable location, and one reason why it is not. Finally, liars were told that EFA knows something about the spy device and who attended the meeting, though it's not clear what they know. As a result, to appear cooperative, liars' third task was to provide a mixture of truthful and false information about the device, and the people present at the meeting. How much truthful and false information provided was at the discretion of the participant. Liars also received the same information as truth tellers regarding the reward for being convincing and the penalty of being unconvincing and completed the same 'Pre-Interview Questionnaire'. However, before liars started the interview, they were left alone and given as much time as they needed to think about the details of the Hotel Reception. They were not provided with any writing materials during this time. The time (in seconds) that liars took to consider what they would say about the Hotel Reception was recorded by the experimenter. They took on average $M = 264.63$ seconds ($SD = 149.01$) to prepare themselves and preparation time ranged from 70 to 900 seconds.

The Interview. All interviews were videotaped and the participant was made aware of this videotaping.The interview protocol consists of two interviewers, one silent and one speaking. The interviewers were blind to the veracity condition and did not have any knowledge of the information presented in the meeting. We used four interviewers in total, all female, aged between 31 – 54 years. Before the interview commenced, the speaking interviewer introduced herself and the silent interviewer, stressing that the silent interviewer has been trained to detect deception in interviews. The interviewee was also informed that the interviewers know s/he attended the meeting with HMI, and that the purpose of the meeting

was to select a location to host a spy device. The interview consisted of 15 questions examining the content of the meeting and the members present. Questions 1-2 focussed on the room where the meeting took place, and what occurred during the meeting. Questions 3-12 examined the locations that were presented in the meeting, and all the associated details. Questions 13-14 required participants to provide information about the device, and its physical and technical features. Finally, for Question 15, participants examined a series of photos and were required to identify those present in the meeting, as well as providing details about their role in HMI.

Mimicry. In the mimicry 'present' condition ($N = 84$), from the beginning of the interview, the silent interviewer mimicked the posture and mannerismsdisplayed by the participant (adapted fromChartrand and Bargh, 1999). The interview room was set up so that the interviewee was positioned four feet in front of the two interviewers, with a clear line of sight between all those present.As soon as the participant had taken their seat, the silent interviewer altered her own posture to mimic that of the interviewee. With regards to the participants' mannerisms, the silent interviewer mimicked the resting position and stereotyped movement of the legs and arms. The silent interviewer did not mimic gesticulations, as this type of mimicrymay be too obvious and could lead to the mimicry being detected by the interviewee. The silent interviewer was extremely careful not to engage in any mimicry that may cause the participant to become aware that they are being mimicked(mainly gesticulations), as this can have a damaging effect on rapport (Lakin&Chartrand, 2003).We tested our mimicry manipulation in a pilot study which revealed that silent interviewers were able to mimic the behaviour of interviewees without the interviewees realising. In order for the mimicry manipulation to go unnoticed, interviewers delayed their mimicry of the interviewees by a few seconds. In the mimicry 'absent' condition, no mimicry of the interviewee took place throughout the interview; instead the

interviewer displayed neutral mannerisms, which remained constant throughout the interview. Of those participants who were mimicked ($N = 81$), nine reported in the post-interview questionnaire that the silent interviewer was mimicking their behaviour. These nine participants did not influence the results, because when we excluded them from the analyses presented in this article, the same pattern of results emerged as when we included them. We therefore decided to include those nine participants in the analyses. The first interviewer was not instructed to mimic the interviewees' behaviour, and adopted a neutral posture (seated upright, legs uncrossed) throughout the interview.

After the interview, all participants completed a 'Post-Interview Questionnaire' examining what the participants could remember about the three aspects of the meeting (device, location, and people present at the meeting). First, participants were asked to list nine details about the device, including the mnemonic (for example, 'What was the name of the acronym you were given to help remember the spy device?'), as well as the four physical and four technical details of the device (for each of the eight letters of the mnemonic, participants had to fill in the corresponding word, for example, the first letter 'B' related to a physical detail of the device, and represented the word 'Black'). Second, the participants had to recall six details about the locations presented in the meeting, including: the name of each location (for example, 'In the meeting, which location was voted for?'), and the reason why each location was suitable/unsuitable. Finally, the questionnaire had nine items relating to the confederates, with three items about their names (for example, 'In the meeting, under which names were the other members introduced to you?'), three about their roles, and three about their length of service. For each correct detail recalled, the participant scored one point, and the total for each topic was then calculated. After completing the questionnaire, the participants were debriefed and received £5 for taking part.

Counterbalancing. Three aspects of the procedure (the suggested locations, the selected locationand the interviewers) were counterbalanced. First, to control for any effects on recall resulting from the different locations, the locations were counterbalanced. In each meeting, two locations were presented from a selection of four. The two locations presented were determined by a schedule ensuring that an equal number of participants were exposed to each location. Second, each meeting resulted with a different location winning the vote to host the device, which was also pre-determined for the same reason. The locations themselves were standardised so that each location contained the same number of features re-arranged in a different format. For example, each location floor plan consisted of three rooms (one L-shaped, one rectangular, and one square, two of which were labelled, one which remained blank), and one labelled object (for example, a table or desk). Third, the frequency in which each pair of interviewers was used was counterbalanced, so that the four interviewers were used an equal number of times. The interviewers never changed role, and the same interviewers remained in their respective role of either speaking or silent interviewer.

Coding

Objective Detail and Accuracy. A transcript of every interview was created using audiotapes from each interview. The verbal coding was derived from the transcripts. A coder blind to the hypotheses and experimental conditions read each answer carefully and marked every detail the interviewee gave. These details were then classified as visual, spatial, temporal, action, and auditory. For example, the sentence '...then I sat down in front of the laptop which was beeping' contains one visual detail (laptop), one spatial detail (in front of), one temporal detail (then), one action detail (sat down) and one auditory detail (beeping).We then combined all the details coded into one new variable, representing participants' 'objective detail' score. This objective detail score could range from 0 (no details given) to an

indefinite number. In fact, the score ranged from 26 (score obtained by a lying participant) to 124 (score obtained by a truth telling participant). A second coder, also blind to the hypotheses and experimental conditions, coded a sub-sample of 42 transcripts (25%). The inter-rater reliability between the two coders for objective detail was very high (Intra-class Correlation Coefficient, ICC= .80). For each component detail, the results were as follows: visual detail: ICC = .93; spatial detail: ICC = .93; temporal detail: ICC = 1.00; action detail: ICC = .81; and auditory detail: ICC = .86.

Accurate Detail. In addition, the coder also marked whether each detail was accurate. A series of checklists were created to help the coder score each response. Different checklists were used for different parts of the interview. For example, the one checklist coded the participant's normal order recollection of what occurred in the meeting (Question 2). A participant scored one point for each event s/he mentioned that occurred on the checklist. To demonstrate how the checklist works, item 16 on this checklist was: 'All members casted their votes by a show of hands for each location'. In order to score a point for this item, the participant must clearly make a reference to that event. For example, if the transcript read: 'After the presentation, we had a vote to decide on which location should host the device', the participant scored one point. If a participant's response did not have a clear meaning (by stating something akin to: 'After that, we all put our hands up', then s/he did not score a point for that particular item.In addition, a participant earned extra points for any additional accurate information not present on the checklists. The total accuracy details score could thus range from 0 (no accurate information given) to an indefinite number of accurate units of information given. In fact, the total accuracy details score ranged from 8 (score obtained by a lying participant) to 50 (score obtained by a truth telling participant). A second coder, also blind to the hypotheses and experimental conditions, coded a sub sample of 42 transcripts

(25%). The inter-rater reliability between the two coders was very high (Intra-class Correlation Coefficient, ICC= .94).

Results

Motivation. Participants were motivated to do well in the experiment ($M = 4.33$, $SD = .69$ on a 5-point Likert scale), with 43% reporting that they were 'quite motivated' (score of 4), and 45% 'very motivated' (score of 5). A 2 (Veracity) X 2 (Mimicry) ANOVA with motivation as the dependent variable revealed no significant main or interaction effects (all Fs < .54, all ps> .445) indicating that participants' motivation level was similar amongst the experimental conditions.

Accurate Detail Remembered. Three 2 (Veracity) X 2 (Mimicry) ANOVAs examining participants' post-interview recollections of the device, locations, and confederates resulted in no significant main or interaction effects (all Fs <.87, all ps>.353) indicating that participants' memory of the meeting was similar amongst the experimental conditions. The participants correctly recalled 84.75% of the device characteristics, 86.50% of the locations characteristics and 67.44% of the confederate's characteristics. This represents a satisfactory memory of the meeting.

Hypothesis Testing

Objective detail. A 2 (Veracity) X 2 (Mimicry) ANOVA with objective detail as the dependent variable revealed a significant main effect for Veracity, $F (1, 161) = 8.27$, $p = .005$, $\eta^2 = .05$, $d = .46$, whereas the Mimicry main effect, $F (1, 161) = 2.86$, $p = .093$, $\eta^2 = .02$, and the Veracity X Mimicry interaction effect, $F (1, 161) = 2.89$, $p = .091$, $\eta^2 = .02$, were not significant. Regarding the Veracity main effect, truth tellers ($M = 58.10$, $SD = 23.05$) provided more details that liars ($M = 49.16$, $SD = 16.20$). The interaction statistics ($p = .091$) refer, of course, to any type of interaction. However, in our hypothesis we predicted a

specific type of interaction based on theory and previous mimicry research and the pattern of our results matched the pattern of results we predicted in Hypothesis 1. We believe thisjustifies further examination of the data.We examined the difference between truth tellers and liars in the two mimicry conditions separately. This also addresses Hypothesis 1 in which we referred to differences between truth tellers and liars in these specific conditions.

Insert Figure 1 about here

Figure 1 suggests that truth tellers gave more detailed responses in the mimicry 'present' condition compared to the mimicry 'absent' condition, whereas liars gave a similar amount of detail in both mimicry conditions. In the mimicry 'absent' condition truth tellers (M = 52.78, SD = 23.00) were no more detailed than liars (M = 49.17, SD = 16.41), F (1, 79) = .66, p = .418, d = .18.. A discriminant analysis using the mimicry 'absent' data with the Veracity group as the classifying variable and objective detail as the predictor did not yield a significant discriminant function, $\chi^2(1)$ = .66, Wilk's Lambda = .99, p =.418. Unsurprisingly, the non-significant function resulted in a chance level total accuracy, 54.3%, with 40.0% of truth tellers and 68.3% of liars being classified correctly. In contrast, in the mimicry 'present' condition truth tellers (M = 63.17, SD = 22.19) provided more detailed responses than liars (M = 49.14, SD = 16.19), F (1, 82) = 10.95, p = .001, d = .72. A discriminant analysis using the mimicry 'present' data with the Veracity group as the classifying variable and objective detail as the predictor revealed a significant discriminant function, $\chi^2(1)$ = 10.21, Wilk's Lambda = .88, p =.001. The function correctly identified 52.4% of truth tellers and 69.0% of liars, resulting in a total accuracy of 60.7%. These findings support Hypothesis 1.

Accurate detail. A 2 (Veracity) X 2 (Mimicry) ANOVA with accurate detail as the dependent variable revealed a significant main effect for Veracity, F (1, 161) = 129.71, p<.001, d = 1.76, and a significant Veracity X Mimicry interaction effect F (1, 161) = 5.79, p

=.017, η^2 = .04. The Mimicry main effect was not significant, F (1, 161) =.02, p =.894,d = .008. Regarding the Veracity main effect, truth tellers (M = 32.77, SD = 8.01) provided more accurate details that liars (M = 20.55, SD = 5.67).

Insert figure 2 about here

Regarding the Veracity X Mimicry interaction effect, Figure 2 suggests that truth tellers gave more accurate responses in the mimicry 'present' condition compared to the mimicry 'absent' condition, whereas liars volunteered fewer accurate details in the mimicry 'present' condition compared to the mimicry 'absent' condition. As a result, the difference in reporting accurate detail was larger in the mimicry present than in the mimicry absent condition.

In the mimicry 'absent' condition, truth tellers (M = 31.53, SD = 6.65) volunteered more accurate information than liars (M = 21.93, SD = 5.34), F (1, 79) = 51.44, $p<.001$, η^2 = .39, d = 1.59. A discriminant analysis using the mimicry 'absent' data with the Veracity group as the classifying variable and accurate detail as the predictor revealed a significant discriminant function, $\chi^2(1)$ = 39.36, Wilk's Lambda = .61, $p<.001$. The function correctly identified 77.5% of truth tellers and 73.2% of liars, resulting in a total accuracy of 75.3%. In the mimicry 'present' condition, truth tellers (M = 33.95, SD = 9.03) again volunteered more accurate information than liars (M = 19.21, SD = 5.77), F (1, 82) = 79.36, $p<.001$, η^2 = .49, d = 1.95.A discriminant analysis using the mimicry 'present' data with the Veracity group as the classifying variable and accurate detail as the predictor revealed a significant discriminant function, $\chi^2(1)$ = 55.17, Wilk's Lambda = .51, $p<.001$. The function correctly identified 76.2% of truth tellers and 90.5% of liars, resulting in a total accuracy of 83.3%.

Discussion

In the present experiment, truth tellers and liars were interviewed about a meeting they attended. We examined the effect of deliberately mimicking participants' nonverbal behaviour on eliciting information and cues to deceit (verbal detail and accurate information volunteered).

The mimicry 'present' condition was somewhat more successful in eliciting cues to deceit than the mimicry 'absent' condition. The Veracity X Mimicry interaction effect was not significant, which suggest that mimicry had no effect. However, without mimicry, no differences emerged between truth tellers and liars in the amount of detail they provided, whereas truth tellers gave more detail than liars when the silent interviewer mimicked the interviewees' behaviour.This suggests that mimicry did have a (small) effect. The pattern of results depicted in Figure 1 suggest that mimicry facilitated talking in truth tellers (but not in liars),supporting previous mimicry research showing that being mimicked makes people more cooperative and compliant (Van Baaren et al., 2003, 2004; Maddux, Mullen and Galins, 2008; Fischer-Lokou et al., 2011; Guéguen et al., 2011). The fact that mimicry did not make liars more talkative could be the result of their inability to make up plausible details (Köhnken, 1996, 2004; Leal et al., in press) or their reluctance to provide detailed responses out of fear that these details will be falsified (Hartwig et al., 2007; Masip&Ces, 2011; Nahari et al., 2012, in press) or not remembered at a later stage (Vrij, 2008).

Some people may argue that we should not have interpreted the interaction effect, given that it was not significant. If we would not have interpreted it, the finding that mimicry elicited a cue to deceit would have remained unnoticed. We justified further interpretation of the interaction effect by arguing that the pattern of results was in alignment with theory and previous mimicry result and in alignment with our hypothesis which was based on such theory and research. In addition, the mimicry manipulation was subtle and, in all likelihood, subtle manipulations only lead to small effects.

The finding that truth tellers and liars were equally detailed in the non-mimicry condition may appear to be at odds with the deception literature in which it is typically found that truth tellers are more detailed than liars (DePaulo et al., 2003; Masip et al., 2005; Vrij, 2005, 2008). Two differences between the present study and other deception studies may explain this exceptional finding. First, unlike in many other studies in which liars are often expected to fabricate their statement (Leins et al., 2003, and see Vrij, Granhag, & Porter, 2010 for a brief overview of deception scenarios), liars were in the present experiment instructed to provide a mixture of truthful and false information. Second, in the present study truth tellers and liars attended the same event, whereas in many other deception studies truth tellers and liars are involved in different activities. The fact that liars were allowed to provide truthful information and undertook the same activities as truth tellers makes lying in the present experiment cognitively easier than in many other studies, and when the task in hand is easy liars may give as many detail as truth tellers.

The results showed an intriguing pattern for providing accurate detail (Figure 2), as it gave the impression that deliberate mimicry led liars to provide *less* accurate detail. We lack an explanation for this finding and believe that it needs to be replicated before any possible negative effects of mimicry on liars can be drawn. This finding, however, demonstrates the relevance of making a distinction between the provision of accurate and inaccurate information and recommend this in future deception research.

The finding that deliberate mimicry encouraged truth tellers in particular to talk further benefits investigators as it enlarges the differences between truth tellers and liars, which, in turn, facilitates lie detection. This finding also fits well in a current stream of deception research: encouraging interviewees to say more (Leal et al., in press; Mann et al., 2013). Encouraging truth tellers to say more has clear benefits. It results in more information, considered to be the core objective of investigative interviewing (Fisher, 2010), and it

benefits investigators because a more detailed account gives them a more detailed picture of the topic under investigation. It also benefits truth tellers as, typically, detailed accounts are more likely to be believed by observers (Bell & Loftus, 1989).

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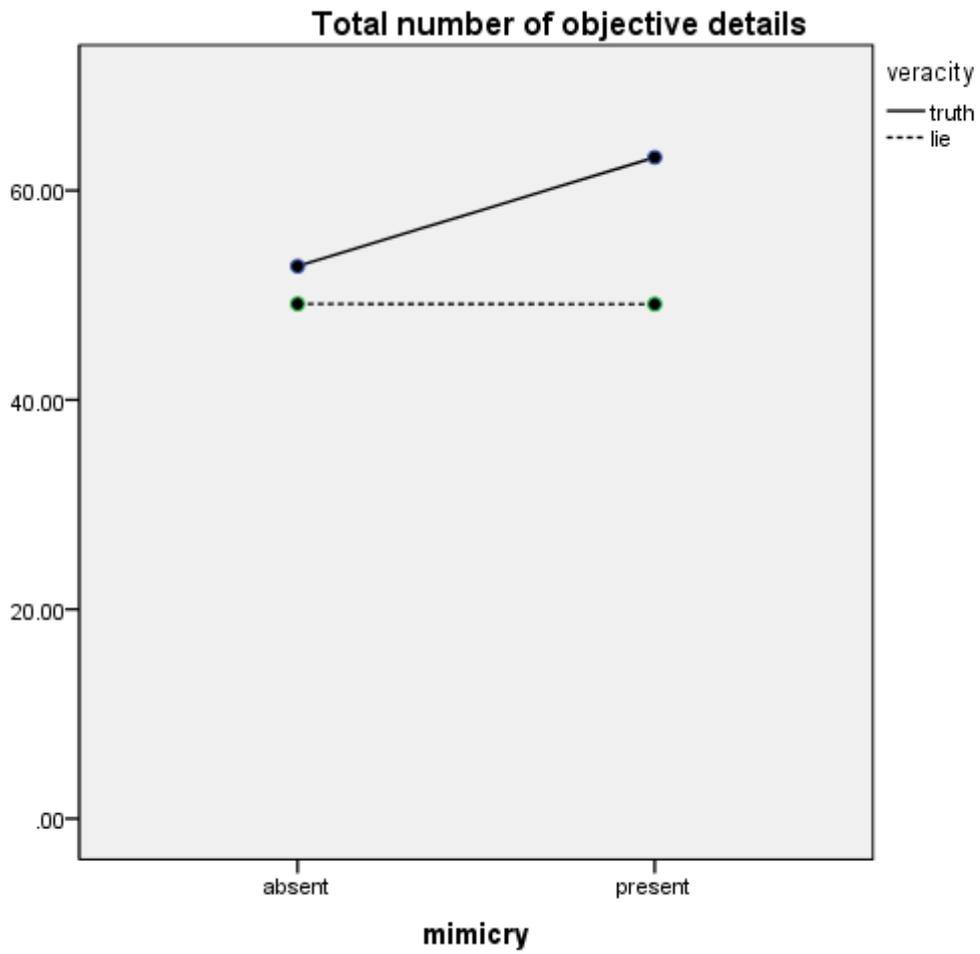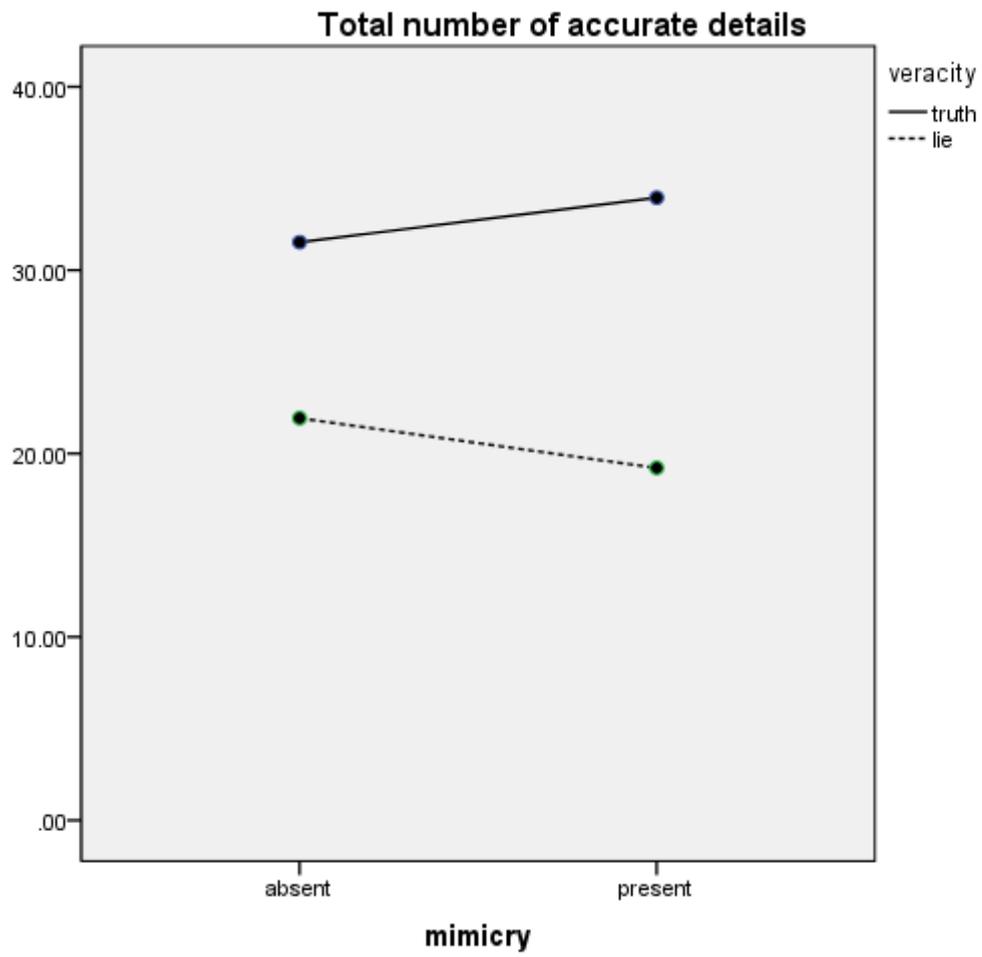
Figure 1. Objective Detail as a Function of Veracity and Mimicry

Figure 2. Accurate Detail as a Function of Veracity and Mimicry.