Using the Model Statement to Elicit Information and Cues to Deceit in Interpreter-Based Interviews

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Abstract

We examined how the presence of an interpreter during an interview affects eliciting information and cues to deceit, whilst using a method that encourages interviewees to provide more detail (model statement, MS). A total of 199 Hispanic, Korean and Russian participants were interviewed either in their own native language without an interpreter, or through an interpreter. Interviewees either lied or told the truth about a trip they made during the last twelve months. Half of the participants listened to a MS at the beginning of the interview. The dependent variables were 'detail', 'complications', 'common knowledge details', 'self-handicapping strategies' and 'ratio of complications'. In the MS-absent condition, the interviews resulted in less detail when an interpreter was present than when an interpreter was absent. In the MS- present condition, the interviews resulted in a similar amount of detail in the interpreter present and absent conditions. Truthful statements included more complications and fewer common knowledge details and self-handicapping strategies than deceptive statements, and the ratio of complications was higher for truth tellers than liars. The MS strengthened these results, whereas an interpreter had no effect on these results.

Keywords: interpreter, model statement, non-native speakers, information gathering, deception

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As a result of globalisation investigators and interviewees often do not share the same native language (Mulayim, Lai, & Norma, 2014), which can hinder the effectiveness of an investigative interview (Gibbons, 2001). In such circumstances an interpreter could become a vital part of the investigation. Deception researchers have started to carry out experimental research examining the effect of the presence of an interpreter on eliciting information and cues to deceit (Ewens, Vrij, Mann, & Leal, 2016; Ewens et al., 2016b, c, d). This article builds upon this work, particularly on Ewens et al. (2016d), in the following manner: (i) We used a different control group (non-native English speakers speaking in their own languages) than Ewens et al. (2016a, b, c, d) who used English speakers speaking in English; (ii) unlike Ewens et al. (2016d), we introduced a control condition to experimentally examine the effect of a Model Statement on eliciting information; and (iii) in addition to 'total detail' (the only verbal cue examined in Ewens et al., 2016a, b, c, d) we examined three additional verbal cues: complications, common knowledge details and self-handicapping strategies.

Total Detail

A consistent finding in the work of Ewens and colleagues is that in interviews where interviewees speak in their own language through an interpreter fewer details are provided than when interviewees speak in their own language without an interpreter. There are two possible explanations for this. First, perhaps interpreters do not translate every detail the interviewee gives and information thus gets lost in translation. Second, perhaps interviewees say less with an interpreter present, because interruptions disrupt the interviewee's train of thought and makes memory retrieval more difficult (Vrij, Hope, & Fisher, 2014; Nelson & Goodmon, 2003) or because an interviewee may decide to be concise when an interpreter is

present given the extra time it takes to communicate through an interpreter (similar to that people are more concise when talking to a hard hearing person, Ewens et al., 2016b). Ewens et al. (2016c) found evidence for both. In that study the interpreter implemented a long consecutive style of interpretation in which the interpreter translates segments of talk. This style is frequently used in real life (Viezzi, 2012), including in intelligence interviews (Department of the Army, 2006). Remembering all the details an interviewee conveys is difficult in such a situation and the interpreters did not translate about 10% of the details given by the interviewees. However, when the interviewees' text was analysed, it still was the case that they provided less detail than interviewees who spoke in their native language without an interpreter.

In Ewens et al. (2016b, c, d) the participants who spoke in their native language through an interpreter came from different countries (Republic of Korea, Russia and US) than the participants who spoke in their native language without an interpreter (UK). It therefore cannot be ruled out that the effect was (in part) caused because of a cultural difference. In the present experiment we avoided this possible confound: Participants who spoke through an interpreter or spoke without an interpreter came from the same countries and spoke in the same languages. Specifically, unlike the previous Ewens et al. studies, half of the participants were interviewed by fellow native speakers of that language.

In ordinary conversations, people never say initially all they know but typically provide a summary of their activities, highlighting some core issues ('I did some shopping in the morning, and had a BBQ in the evening') (Fisher, 2010; Vrij, Hope, & Fisher, 2014). This is, in part, the result of conversation rules (Fisher, 2010, Fisher, Milne, & Bull, 2011). Through life experience, people learn how much detail is anticipated in conversations. Truth tellers realise that in interview settings they have to provide much more information than in ordinary conversations but they still do not provide all the information they know (Fisher,

2010; Vrij, Hope, & Fisher, 2014). One effective way to change truth tellers' expectations about how much information to provide in an interview is to expose them to a detailed model statement (MS), which is an example of a detailed account/story unrelated to the topic of the interview (Leal, Vrij, Warmelink, Vernham, & Fisher, 2015). A MS changes truth tellers' expectations about how much detail is required. As a result, truth tellers exposed to a MS provide more detail than truth tellers who have not been exposed to a MS (Bogaard, Meijer, & Vrij, 2014; Leal et al., 2015).

Since interviewees are particularly reluctant to provide all the information they know when interviewed through an interpreter, it could be predicted that a MS is an effective method in an interpreter interview to get interviewees to say more because there is much room for improvement in providing details in such an interview setting. This is indeed what Ewens et al. (2016d) found: a MS resulted in additional details provided by interviewees in interpreter-present interviews. However, in Ewens et al., the MS was used as a within-subjects method (all interviewees provided an initial recall, then listened to a MS, and then were invited to report again what they had experienced). Since a control group, in which interviewees were asked to report their experiences twice without listening to a MS, was missing it cannot be ruled out that the additional detail was caused by a factor other than the MS. Perhaps mere asking the same question twice leads to more detail. In the present experiment MS was introduced as a between-subjects factor (participants were or were not exposed to a MS).

A consistent finding in deception research is that truth tellers typically provide more detail than liars (Amado, Arce, & Fariña, 2015; DePaulo et al., 2003; Masip, Sporer, Garrido, & Herrero, 2005; Oberlader, Naefgen, Koppehele-Gossel, Quinten, Banse, & Schmidt, 2016; Vrij, 2008). Reasons for this are that liars lack the imagination and skills to convey the amount of detail that truth tellers convey (Vrij, 2008), or are reluctant to provide detail out of

fear that such details may provide leads for investigators to check (Nahari, Vrij, & Fisher, 2014). A MS not only makes truth tellers aware how detailed they are supposed to be, it also makes liars aware of this. The result is that both liars and truth tellers become more detailed after being exposed to a MS (Bogaard et al., 2014; Ewens et al., 2016d; Leal et al., 2015).

Based on these considerations we predicted the following regarding providing detail: Interviewees will provide fewer details through an interpreter than without an interpreter, particularly when no MS is presented (Interpreter X Model Statement interaction, Hypothesis 1a); A MS will increase the total amount of detail provided by truth tellers and liars (Model Statement main effect, Hypothesis 1b); and Truth tellers will provide more details than liars (Veracity main effect, Hypothesis 1c).

Type of Detail: Complications, Common Knowledge Details and Self-Handicapping Strategies

Ewens et al. (2016b, c, d) examined 'total detail'. Although this has been shown to be a diagnostic cue to deceit (Amado et al. [2015] found an effect size of $d = .55$ in their meta-analysis), it also has shortcomings. First, it is a general cue. This makes it a vague cue and all kinds of specific details that reveal deceit are overlooked when examining 'total detail'. Second, there are large individual differences in people's speech (Nahari & Pazuelo, 2015; Nahari & Vrij, 2014; Nahari, in press), therefore cut-off scores -'If a person provides more than an X number of details s/he is likely to be telling the truth, but when the person provides less than this number of details s/he is likely to be lying'- will not work. Not being able to come up with cut off scores is a known problem in verbal lie detection (Nahari & Vrij, 2015; Vrij, 2016). A possible solution is to design 'within-subjects tools', that is, being able to make a decision about the veracity status of an interviewee by comparing different responses made by the same interviewee during a single interview. The development of a verbal within-

subjects lie detection tool would benefit investigators and they often stress the importance of such tools in conversations with academics.

In the present experiment we attempted to design a within-subjects tool by distinguishing between three types of detail: complications, common knowledge details and self-handicapping strategies. Complications have been examined before (in a verbal veracity assessment tool called Criteria-Based Content Analysis, criterion 7, Amado et al., 2015; Vrij, 2008), but common knowledge details and self-handicapping strategies are to our knowledge new in deception research. We will argue that complications are more likely to occur in truthful statements and that common knowledge details and self-handicapping strategies are more likely to occur in deceptive statements. The within-subjects element is that someone can examine the ratio of complications (complications / (complications + common knowledge details + self-handicapping strategies) which should be higher for truth tellers than for liars.

Complications.

'Complications' is anything a person says that complicates the statement. For example, if someone says that while driving to his holiday destination he made a brief visit to a city that he always wanted to visit, he describes a complicated travel itinerary (it is more straightforward to drive directly to the holiday destination). If the person then adds that he had a flat tire en route and, that he got lost, and that there was heavy traffic due to a road accident he adds three more complications. Complications do not just occur when people travel, they occur all the time: 'The sailing race was cancelled, there was not enough wind', 'When we arrived at the museum it was closed', 'Initially we did not see our friend, it appeared that he was waiting at a different entrance'. Complications are more likely to occur in truthful statements than in deceptive statements, as a meta-analysis of CBCA research revealed (Amado et al., 2015). Making up complications requires creative thinking and not everyone possesses this skill. In addition, research has shown that liars prefer to 'keep their

stories simple' (Hartwig, Granhag, & Strömwall, 2007) and including many complications does not constitute a simple story.

Common Knowledge Details.

Common knowledge details are related to scripts. A script is a pre-determined, stereotyped sequences of actions that defines a well-known situation (Schank & Abelson, 1977, p. 41) (e.g., 'John went to a restaurant. He ordered lobster. He paid the check and left'). Although this script does not include much detail about what happened (we are not informed about what John ate, whether he sat down, who he paid and why he paid) people feel that they 'know' these facts because they can rely on knowledge encountered in their lives in such situations. Several scholars reasoned that liars are more likely to include scripts in their statements than truth tellers (Köhnken, 2004; Sporer, 2016; Volbert & Steller, 2014). Truth tellers, who have personal experiences of an event, are likely to report such unique experiences and when they do this the statement is no longer a script. Liars do not have personal experiences of the event they report and then draw upon general knowledge to construe the event by using "pointers" to describe the event (Sporer, 2016). In addition, liars prefer to keep their stories simple (Hartwig et al., 2007) and a scripted story constitutes a simple story.

The way deception researchers use the word scripts is perhaps somewhat misleading. It stretches beyond Schank and Abelson's (1977) description as the scripted events they refer to do not necessarily involve a sequence of events. In our experiment scripted events did not necessarily involve a sequence of events either. Instead, we coded statements as scripted when a statement strongly invoked common stereotypical knowledge about everyday events (e.g. 'We went to the National Museum where we spent a few hours'). To avoid confusion with scripts, we do not label them as such but call them common knowledge details.

Self-handicapping strategies.

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Self-handicapping strategies are justifications people give why they cannot provide certain information, for example: “My dad did all the planning”, “Nothing unexpected happened, I am a very organised person”, “I can't remember the name of the hotel, it was a while ago I was there”, “I can’t remember, I’ve got a poor memory”, “I fell asleep for most of the bus journey”. The justification is crucial for a self- handicapping strategy, the statement ‘I can’t remember’ itself is not a self-handicapping strategy, it is called ‘admitting lack of memory’, which is a CBCA criterion (criterion 15). We use the term self-handicapping strategies because the result of these justifications is that the interviewee is not able to give a certain piece of information. We expect liars to include more self-handicapping strategies in their statements than truth tellers. For liars, who are inclined to keep stories simple, not having to provide information seems like an attractive strategy. However, liars are also concerned about their credibility and believe that admitting lack of knowledge and/or memory appears suspicious (Ruby & Brigham, 1998). A solution is to provide a justification for the inability to provide information.

The impact of a model statement and interpreter on complications, common knowledge details and self-handicapping strategies.

There is evidence that a MS enhances differences in speech between truth tellers and liars. In their MS experiment, Leal et al. (2015) found that the difference in plausibility between the stories of truth tellers and liars was more pronounced in the MS-present condition than in the MS-absent condition. However, Leal et al. did not examine which type of detail caused this difference in plausibility.

A MS may enhance the difference between truth tellers and liars in terms of complications, common knowledge details and self-handicapping strategies. A MS is likely to increase complications. These are the kind of detail that interviewees are likely to leave out when describing key aspects of activities as complications are often peripheral elements of a

story and a story often makes perfect sense and is easily understood without reporting complications. In the example given above, all sorts of complications that happen en route to a holiday destination are not key aspects of a story when describing the travel to the holiday destination, thus truth tellers may leave them out when they are not exposed to a MS. Since liars either lack the creativity to make up complications or are reluctant to provide them in order to keep their story simple, the increase in complications as a result of a MS is more likely to occur in truth tellers than in liars. This results in more pronounced differences between truth tellers and liars in the MS-present condition than in the MS-absent condition.

A MS may have an opposite effect on truth tellers and liars regarding common knowledge details. A MS could make truth tellers to provide fewer common knowledge details as they may fill their scripted stories with further experienced details. Since liars are less able or willing to add extra information to their scripted descriptions of events, they may report some extra scripted events to fulfill the expectation to be more detailed. The result is that the difference in common knowledge details between truth tellers and liars will be more pronounced in the MS-present condition than in the MS-absent condition.

A MS may also have an opposite effect on truth tellers and liars regarding self-handicapping strategies. Liars feel the pressure to say more when exposed to a MS and may decide to add some self-handicapping strategies to justify why they cannot give too many additional details. Truth tellers, who will be more inclined to tell it all when exposed to a MS, may add information where possible which makes a statement no longer a self-handicapping strategy (My dad planned the trip, *but I told him what I wanted to see*.).

A MS could result in truth tellers admitting lack of memory (‘I forgot the street name’) but this is not a self-handicapping strategy as long as no justification is given for the lack of memory. Since truth tellers are less inclined than liars to believe that admitting lack of

memory sounds dishonest, there is no reason to assume that they will provide such justifications.

We explored the effect of an interpreter on complications, common knowledge details and self- handicapping strategies. This is an empirically relevant question and we cannot rule out that the presence of an interpreter has an effect. That is, perhaps interviewees are inclined to be more concise in the presence of an interpreter, which could result in fewer complications and more common knowledge details. Or perhaps interpreters leave out complications and replace them with common knowledge details in their translations. Or perhaps a combination of both processes will occur.

Hypotheses regarding complications, common knowledge details and self-handicapping strategies.

Based on the considerations described above we formulated the following hypotheses: Across both MS-present and MS-absent conditions, compared to liars, truth tellers will include in their statements more complications (Hypothesis 2a), fewer common knowledge details (Hypothesis 2b) and fewer self-handicapping strategies (Hypothesis 2c).

A MS will increase the number of complications in a statement (Hypothesis 3), but will not have an effect on common knowledge details or self-handicapping strategies, due to the expected opposite effect of a MS on truth tellers and liars for these cues.

Since the MS is expected to enlarge the differences between truth tellers and liars, we therefore expected that the effects predicted in Hypotheses 2a, 2b, and 2c would be stronger in the MS-present than in the MS-absent condition, and we thus predicted that particularly in the MS-present condition truth tellers will include more complications (Hypothesis 4a), fewer common knowledge details (Hypothesis 4b) and fewer self-handicapping strategies (Hypothesis 4c) than liars.

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We derived our final hypothesis from Hypothesis 4: The ratio of complications will be higher in truth tellers than in liars (Hypothesis 5a), particularly in the MS-present condition (Hypothesis 5b).

Method

Participants

A total of 199 participants (44 males, 153 females and two unknown) took part in the study. Their age ranged from 18-38 years with an average age of $M = 21.55$ years ($SD = 2.82$). Participation took place in three different universities in the Republic of Korea, Russia and USA, and the background of the participants was Korean ($n = 80$), Russian ($n = 80$) and Hispanic ($n = 39$).

Procedure

Recruitment, pre-condition selection form, preparation and pre-interview questionnaire.

Participants were recruited via an advert on the university intranets and advertisement leaflets. The advert explained that the experiment would require participants to tell the truth or lie about a trip away that they may (or may not) have taken within the last year. We decided upon ‘last year’ so that truth tellers would still remember many details about their trip and liars could not easily say ‘I can’t remember’ when answering the questions. On arrival to the corresponding university, participants were given a participant information sheet and signed an informed consent form. They were then given a pre-condition selection form to complete on which six cities were listed the researchers thought the participants may have visited during the last twelve months (different cities were used for the three different countries). There were also two blank lines on the form on which the participant could write down which cities other than the ones listed on the form they have visited during the last twelve months.

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For each city they indicated i) whether they have been there during the last twelve months, ii) when they have been there during the last twelve months, iii) for how long they stayed there, and iv) whether they have lived there. For truth tellers the experimenter selected a city where the participant had stayed during the last twelve months for at least two nights but never has lived in. The very few participants who were allocated to the truth teller condition but who did not fulfil these criteria were allocated to the deception condition. For liars, the experimenter selected a city where the participant had never been before. The cities liars discussed were matched with the cities the truth tellers discussed. In total, truth tellers discussed more than twenty cities, and liars discussed most of these cities.

Truth tellers were informed that they would be interviewed about city 'X' and asked to answer the questions truthfully. Liars were informed that they would be interviewed about city 'X' and that they had to pretend to have stayed there for at least two nights during a trip made during the last twelve months. Truth tellers and liars were then left with a computer with internet access and told they had twenty minutes to prepare for their interview, or to let the experimenter know if they were ready before that time. They were told that they were allowed to make notes while doing their research. Truth tellers and liars were told that it was important to be convincing because, if they did not appear convincing, they would be asked to write a statement about what they told the interviewer in the interview. In a pre-interview questionnaire the truth tellers and liars rated their thoroughness of preparation via three items: (1) shallow to (7) thorough; (1) insufficient to (7) sufficient; and (1) poor to (7) good. The answers to the three questions were averaged (Cronbach's alpha = .87) and the variable is called 'thoroughness'. They were also asked the following question: 'Do you think the amount of time you were given to prepare was: (1) insufficient to (7) sufficient. We also asked in an open-ended question how they had prepared themselves.

Eight experimental conditions.

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Participants were randomly allocated to one of the eight experimental cells. A total of 99 participants were allocated to the truth condition and 100 to the lie condition; 100 to the Model Statement absent condition and 99 to the Model Statement present condition; and 99 to the Interpreter absent condition and 100 to the Interpreter present condition. Individual cell sizes varied from 24 (one cell) to 25 (the seven other cells).

In total, three interpreters were used in the study, one in each country. The Korean and Hispanic interpreters were professional interpreters; the Russian interpreter spoke fluent English and had a Masters degree, which included English language. The Korean and Russian interpreters had worked for us before. The interpreters used a long consecutive interpreter style (they interpreted chunks of information uttered by the participant rather than interpreting sentence by sentence) and took notes during the interview.

In the interpreter condition, one British interviewer was used, whereas in the non-interpreter condition one Russian, one Korean and one Hispanic interviewer were used. Prior to the experiment the British interviewer (who is a very experienced interviewer and has interviewed in many experiments before) instructed the other interviewers how to interview. They were asked to be friendly and not to interrupt the interviewee and to ask the six questions listed on the standardised interview protocol in the order mentioned on the protocol. Several practice sessions took place until the British interviewer was satisfied with the interview style of the interviewer. That is, she was satisfied with the demeanour of the interviewers (appeared friendly) and the opportunities they gave to the interviewees to talk (no interruptions and no quick continuation with the next question when the interviewee stopped talking). To assess consistency in interview style between the interpreter and non-interpreter conditions, participants were asked to assess in a post-questionnaire the rapport they experienced with the interviewer (see below).

The interview.

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Prior to the interview the experimenter told the interviewer about which city to interview the participant. The interviewer was unaware of the veracity status of the participant. To make the interviewee feel comfortable and to avoid floor effects in establishing rapport interviewees were offered a glass of water from the interviewer, as offering something helps rapport building (reciprocation principle, Cialdini, 2007).

The interviewer started by saying: "I understand from my colleague that you have visited _____ I would now like to ask you some questions about this visit." In the Model Statement present condition the interviewer continued: "Before I do so I would like to play you a model statement to give you an idea how much detail I like you to include in your responses." An audiotaped model statement was then played. It was 1.30 minutes long and unrelated to a holiday trip, as we wanted to give participants an idea about what a detailed account entails rather than to give them an idea about what they actually could say during the interview. In the initial recording (Leal et al., 2015) a person gives a detailed account of attending a motor racing event. The recording was a spontaneous, unscripted, recall of an event, truly experienced by the person, and the only instruction each person received was to be as detailed as possible (for a transcript of the recording please contact the first author). The recording was subsequently audio-recorded in Russian, Korean and Hispanic by native speakers and the participant listened to the model statement in his/her own native language.

After the MS the interviewer continued: "I am going to ask you some questions and before responding to each question I would like you to bear in mind the amount of detail given in the statement you just heard and please try and provide a similar amount of detail in your responses."

The interview contained six questions, including: "Please tell me in as much detail as possible everything you did when you were at _____ from the moment you arrived to the moment you left" (Question 1); "Tell me in as much detail as possible about your

accommodation where you stayed, including the location and address if you can remember, and what (tourist) attractions were nearby?" (Question 3), "Tell me in as much detail as possible everything you did to plan this trip? E.g. organising transport, accommodation, where to visit and so on." (Question 4), and "Can you tell me in as much detail as possible if there was anything unexpected that happened or perhaps something that didn't go to plan when *organising* this trip?" (Question 6). A copy of the full interview protocol is available from the first author. In the MS-present condition the participant was for each question reminded about the MS in the following way: e.g. "*Remembering the model statement,* Please tell me in as much detail as possible everything you did when you were at _____ from the moment you arrived to the moment you left" (Question 1).

The interviews were video (interviewees only) and audio recorded and the English speech in the audiotapes was subsequently transcribed. In other words, in the interpreter conditions the speech from the interpreter was transcribed. We did this because it is this speech that interviewers will understand in real life interviews with interpreters. In a study in which in the interpreter present interviews both the interviewee's and interpreter's speech were both transcribed, coded and analysed, virtual identical findings in the two data sets emerged in terms of eliciting information and cues to deceit (Ewens et al., 2016c).

Post-interview questionnaire.

After the interview, participants completed a post-interview questionnaire, which was translated and completed in the native language of the participant. The questionnaire measured motivation to perform well during the interview (measured on a 5-point Likert scale from 1 = not at all motivated to 5 = very motivated) and likelihood of writing a statement (on a 7 point Likert scale ranging from 1 = not at all to 7 = totally). They were also asked the extent to which they told the truth during the interview on an 11 point Likert scale ranging from 0% to 100%.

Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics such as 'smooth', 'bored', 'engrossed', and 'involved' (Cronbach's alpha = .81). The participants were finally asked to write down how they had prepared themselves for the interview.

Coding

All coders were blind to the hypotheses and Veracity condition.

Detail.

The coders were taught the coding scheme by the first author who has twenty years of experience in coding detail. A coder first read the transcripts and coded each detail in the interview. To give an example, the answer 'Where I went to everything was nearby. The Space Center was near that hotel, like 10-11 minutes away. It was close to the hotel and the mall too. The only thing that was not was the aquarium. It was… that one was more towards downtown Houston' contained eleven details. Each detail was only coded once, thus repetitions were not coded. A second coder coded a random sample of 50 transcripts. Inter-rater reliability between the two coders, using the two-way random effects model measuring consistency, was high (Single Measures ICC = .87).

Two coders coded independently from each other complications, common knowledge details and self- handicapping strategies. Three examples of complications are: i) 'Generally, we were about to miss the performance because of me, because they have another time there, an hour gain or lose, something like that'; ii) 'The bus arrived three hours too early in Moscow'; and iii) 'The fact is that there are no places to visit in the town itself, you have to drive away'. Three examples of common knowledge details are: i) 'We drank a lot during the flight and when the guys met us we continued to drink walking in the city'; ii) 'They showed us the houses and told us something about them'; iii) 'We tried to absorb as much of

this cultural layer as we could'. Three examples of self-handicapping strategies are: i) 'I usually have everything quite strictly planned so in my life unexpected things happen rarely; ii) 'I did not organise anything, our trips are always planned by dad'; iii) 'I did not plan anything, I trusted my aunt because she lives in this city and knows it very well'.

Inter-rater reliability between the two coders, using the two-way random effects model measuring consistency, was high for complications (Average Measures, Intraclass correlation coefficient, ICC = .95) and self-handicapping strategies (Average Measures ICC = .85) and satisfactory for common knowledge details (Average Measures ICC = .64). Disagreements were resolved between the two coders. All disagreements occurred because one coder missed a cue. To calculate the ratio of complications a total score was computed (number of complications + number of common knowledge details + number of self-handicapping strategies) and the number of complications was divided by this total score. Thus, a transcript with five complications, three common knowledge details and no self-handicapping strategies received a score of .625. Scores > .50 indicate that the participants reported more complications than common knowledge details or self-handicapping strategies, whereas scores < .50 indicate that the participants reported more common knowledge details or self-handicapping strategies than complications.

Open ended questions.

One coder read the answers of the participants about their preparation and came up with thirteen distinctive categories and a miscellaneous category. She explained the coding scheme to two coders who allocated the participants' answers to the categories. The inter-rater reliability between the two coders was good, Kappa = .78. The coders discussed the cases in which they disagreed. These discussions always resulted in a mutual agreement for these cases.

Results

Preparation

A oneway ANOVA with Veracity as factor and thoroughness as dependent variable revealed that truth tellers (M = 4.84, SD = 1.26, *95% CI* [4.60, 5.08]) rated their preparation as more thorough than liars (M = 4.49, SD = 1.17, *95%* CI [4.25, 4.73]), $F(1, 197) = 4.11$, $p = .044$, $d = 0.29$. In total 20.2% of truth tellers and 28.0% of liars rated their preparation as 'not thorough' (score of 1 to 3 on the 7-point Likert scale). Truth tellers (M = 6.04, SD = 1.26, *95% CI* [5.74, 6.34]) also believed more than liars (M = 4.92, SD = 1.72, *95% CI* [4.62, 5.22]), that they were given sufficient time to prepare themselves for the interview, $F(1, 197) = 27.51$, $p < .001$, $d = 0.75$. In total 5.1% of truth tellers and 22% of liars thought that they were given insufficient preparation time for the interview (score of 1 to 3 on the 7-point Likert scale). We introduced thoroughness and preparation time as covariates in the hypotheses testing analyses.

The open-ended answers revealed that many truth tellers (n = 59) relied on their memory, feelings and photos they took. Two other answers frequently reported were looking at maps (n = 10) and looking at hotels and tourist sites (n = 10).

The activities of liars were somewhat more diverse than those of truth tellers, and activities frequently mentioned were looking at hotels and tourist sites (n = 19), looking at maps (n = 14), thinking about how such a trip would go (e.g. length, transportation, costs, n = 11), and looking at types of food specialities and food reviews of the city (n = 10).

Manipulation Checks

Rapport.

An ANOVA with Interpreter as factor and rapport as dependent variable did not show a difference in rapport between the two conditions, $F(1, 197) = 0.31$, $p = .579$, $d = 0.07$. The grand mean revealed that the interviewees perceived the rapport with the interviewer as very good by the participants (M = 5.56, SD = .81 on a 7-point scale).

Motivation, likelihood of receiving a penalty, number of days discussed in the report, time since the trip was made and percentage truth telling in the interview.

The grand mean showed that the participants were motivated to perform well (*M* = 3.98, *SD* = .64 on a 5-point scale). A 2 (Veracity) X 2 (Model Statement) X 2 (Interpreter) ANOVA revealed no significant main or interaction effects, all *F's* < 1.20, all *p's* > .27. Liars (*M* = 4.02, *SD* = 1.60, *95% CI* [3.60, 4.20]) were more convinced that they would have to write a statement than truth tellers (*M* = 3.45, *SD* = 1.52, *95% CI* [3.15, 3.76]), *F*(1, 191) = 4.27, *p* = .040, *d* = 0.37. All the other effects were not significant, all *F's* < 1.54, all *p's* > .21. Those interviewed without an interpreter discussed on average more days away in their interview (*M* = 4.57, *SD* = 5.32, *95% CI* [3.88, 5.68]) than those interviewed with an interpreter, (*M* = 3.18, *SD* = 1.62, *95% CI* [2.57,4.37]), *F*(1, 191) = 4.11, *p* = .044, *d* = 0.40. All the other effects were not significant, all *F's* < 0.63, all *p's* > .42. We included 'the number of days discussed' as a covariate in the hypotheses testing analyses. Since we did not predict any effects for nationality of the participants but wanted to control for possible effects of this factor, we also included 'nationality' as a covariate in the hypotheses testing analyses.

Truth tellers were asked on the pre-condition selection form when they made the trip they discussed. On average this trip was made *M* = 5. 74 months prior to the interview (*SD* = 3.33). This variable was not correlated with any of the main dependent variables in the study (detail, complications, common knowledge details, self-handicapping strategies or ratio of complications), all *r's* < .17, all *p's* > .10).

Truth tellers told the truth significantly more (*M* = 94.75, *SD* = 10.23, *95% CI* [91.01,98.47]) than liars (*M* = 20.40, *SD* = 24.74, *95% CI* [16.69,24.10]), F(1, 191) = 777.84, p < .001, d = 4.25). All the other effects were not significant, all *F's* < 2.32, all *p's* > .13

Hypothesis Testing

All *Ms*, *SDs* and CIs related to significant Veracity main effects and significant Veracity X Model Statement interaction effects are reported in Table 1 and all *Ms*, *SDs* and CIs related to significant Model Statement main effects are reported in Table 2.

Tables 1 and 2 about here

Total detail (Hypothesis 1).

A 2 (Veracity) X 2 (Model Statement) X 2 (Interpreter) ANCOVA was conducted with detail as the dependent variable and 'thoroughness', 'preparation time', 'nationality', and 'number of days discussed during the interview' as covariates. Significant main effects emerged for Veracity, $F(1, 187) = 12.41$, $p < .001$, $d = .52$ and Model Statement, $F(1, 187) = 12.73$, $p < .001$, $d = .54$. All other effects were not significant, all $F's < 2.88$, all $p's > .09$. Truth tellers provided more details than liars, supporting Hypothesis 1c, and participants exposed to the MS provided more details than those not exposed to the MS, supporting Hypothesis 1b.

In Hypothesis 1a we predicted a specific type of interaction between Interpreter and Model Statement. In alignment with Nahari and Ben-Shakhar (2011) and Shaw et al. (2015) we believe that this justifies further examination of the data, specifically examining the difference between the two interpreter conditions in the two Model Statement conditions separately, as this addresses Hypothesis 1a. Follow up analyses revealed that in the MS-absent condition, participants without an interpreter provided more details than participants with an interpreter, $F(1, 94) = 4.72$, $p = .032$, $d = .48$. In the MS-present condition, participants without an interpreter provided a similar amount of details as participants with an interpreter, $F(1, 93) = 0.626$, $p = .431$, $d = .16$. This pattern of results supports Hypothesis 1a.

Complications, common knowledge details and self-handicapping strategies (Hypotheses 2 - 4).

Using the Model Statement in Interpreter-based Interviews

Three 2 (Veracity) X 2 (Model Statement) X 2 (Interpreter) ANCOVAs were conducted with complications, common knowledge details and self-handicapping strategies as the dependent variables and 'thoroughness', 'preparation time', 'nationality' and 'number of days discussed during the interview' as covariates. For complications, significant main effects for Veracity, $F(1, 187) = 19.07$, $p < .001$, $d = .73$ and Model Statement, $F(1, 187) = 10.95$, $p = .001$, $d = .63$, and a significant Veracity X Model Statement interaction effect emerged, $F(1, 187) = 6.15$, $p = .014$, *partial eta*$^2 = .032$. All other effects were not significant, all *F's* < 2.21, all *p's* > .13. Truth tellers included more complications in their statements than liars, supporting Hypothesis 2a. Participants included more complications in the MS-present condition than in the MS-absent condition, supporting Hypothesis 3.

Regarding the Veracity X Model Statement interaction, in the MS-absent condition, truth tellers included more complications in their statements than liars, $F(1, 94) = 8.57$, $p = .004$, $d = .66$. Also in the MS-present condition, truth tellers included more complications in their statements than liars, $F(1, 93) = 12.52$, $p < .001$, $d = .92$. The effect was stronger in the MS-present condition, which supports Hypothesis 4a.

For common knowledge details, significant main effects for Veracity, $F(1, 187) = 5.49$, $p = .02$, $d = .48$ and Interpreter, $F(1, 187) = 4.63$, $p = .033$, $d = .32$, and a significant Veracity X Model Statement interaction effect emerged, $F(1, 187) = 4.23$, $p = .041$, *partial eta*$^2 = .022$. All other effects were not significant, all *F's* < 0.17, all *p's* > .68. Liars included more common knowledge details in their statements than truth tellers, supporting Hypothesis 2b. Unexpectedly, participants interviewed without an interpreter included more common knowledge details in their statements ($M = 3.53$, $SD = 2.30$, *95% CI* [3.08, 3.96]) than participants interviewed with an interpreter ($M = 2.79$, $SD = 2.32$, *95% CI* [2.36, 3.23.70]).

Regarding the Veracity X Model Statement interaction, in the Model Statement absent condition, truth tellers and liars included a similar amount of common knowledge details in

their transcripts, $F(1, 94) = 0.10$, $p = .747$, $d = .23$. In the MS-present condition, truth tellers included fewer common knowledge details in their statements than liars, $F(1, 93) = 7.51$, $p = .007$, $d = .75$. This supports Hypothesis 4b.

For self-handicapping strategies, significant main effects for Veracity, $F(1, 187) = 21.94$, $p < .001$, $d = .78$ and Interpreter, $F(1, 189) = 4.60$, $p = .033$, $d = .29$ emerged, whereas all other effects were not significant, all $F's < 2.33$, all $p's > .12$. Truth tellers included fewer self-handicapping strategies in their statements than liars[1], supporting Hypothesis 2c. Unexpectedly, participants interviewed without an interpreter included more self-handicapping strategies in their statements ($M = 0.63$, $SD = 0.86$, *95% CI* [0.48, 0.77]) than participants interviewed with an interpreter ($M = 0.41$, $SD = 0.67$, *95% CI* [0.26, 0.55]). Since the Veracity X Model Statement interaction was not significant, Hypothesis 4c was rejected.

Ratio of complications (Hypothesis 5).

A 2 (Veracity) X 2 (Model Statement) X 2 (Interpreter) ANCOVA was conducted with the ratio of complications as dependent variable and 'thoroughness', 'preparation time', 'nationality' and 'number of days discussed during the interview' as covariates. The analysis revealed significant main effects for Veracity, $F(1, 187) = 50.59$, $p < .001$, $d = 1.12$ and Model Statement, $F(1, 187) = 4.54$, $p = .034$, $d = .29$, and significant effects for the Veracity X Model Statement interaction effect, $F(1, 187) = 4.21$, $p = .042$, *partial* $eta^2 = .022$, and the Veracity X Interpreter interaction effect, $F(1, 187) = 3.99$, $p = .047$, *partial* $eta^2 = .021$. All other effects were not significant, all $F's < 1.81$, all $p's > .181$. Truth tellers obtained a higher ratio of complications in their statements than liars, which supports Hypothesis 5a. These ratios showed that, on average, truth tellers included *more* complications and liars *fewer* complications in their statements than common knowledge details and self-handicapping strategies. Participants included a higher ratio of complications in the MS-present condition than in the MS-absent condition.

Using the Model Statement in Interpreter-based Interviews

Regarding the Veracity X Model Statement interaction, in the MS-absent condition, truth tellers included a higher ratio of complications in their statements than liars, $F(1, 94) = 13.53$, $p < .001$, $d = .82$. Also in the MS-present condition, truth tellers included a higher ratio of complications in their statements than liars, $F(1, 93) = 34.18$, $p < .001$, $d = 1.56$. The effect was the strongest in the MS-present condition, and, as the *d*-score (1.56) and as mean scores in Table 1 indicate, very substantial in the MS-present condition. These findings support Hypothesis 5b.

Regarding the Veracity X Interpreter interaction, in the Interpreter absent condition, truth tellers (*M* = 0.67, *SD* = 0.28, *95% CI* [0.60, 0.74]) obtained a higher ratio of complications than liars (*M* = 0.46, *SD* = 0.24, *95% CI* [0.39, 0.53]), $F(1, 93) = 12.25$, $p < .001$, $d = .81$; and also in the Interpreter present condition, truth tellers (*M* = 0.77, *SD* = 0.21, *95% CI* [0.70, 0.83]) obtained a higher ratio of complications than liars (*M* = 0.42, *SD* = 0.27, *95% CI* [0.35, 0.49]), $F(1, 94) = 36.75$, $p < .001$, $d = 1.43$. The effect was the strongest in the Interpreter present condition.

Discriminant Analyses.

Table 3 about here

We tested the utility of the model statement for eliciting cues to deceit and focused on two main dependent variables: the within-subjects variable 'ratio of complications' and the between-subjects variable 'total detail'. First, we ran discriminant analyses for the i) MS-absent and ii) MS-present conditions separately. In each case, the objective group belonging (truthful versus deceptive) was the classifying variable and the predictor was the ratio of complications or details. We then ran four additional discriminant analyses in which we made a further distinction into Interpreter-absent and Interpreter-present conditions. We did this for ratio of complications and also for total details. All the relevant statistical information is provided in Table 3.

Using the Model Statement in Interpreter-based Interviews

In the MS-absent condition (the two interpreter conditions combined), 66% of truth tellers and 68% of liars (67% total accuracy rate) were classified correctly. In the MS-present condition (again the two interpreter conditions combined) 80% of truth tellers and 78% of liars (79% total accuracy rate) were classified correctly. In other words, the MS-present condition obtained better results than the MS-absent condition, which supports Hypothesis 5b.

A further distinction into Interpreter-absent and Interpreter-present conditions revealed that the pattern just described held true in both interpreter conditions: Truth tellers and liars were classified more accurately in the MS-present than in the MS-absent conditions. The discriminant analyses further revealed that the accuracy rates were somewhat higher in the interpreter-present than in interpreter-absent conditions.

The results for the 'total detail' variable showed that this variable was less effective in correctly classifying truth tellers and liars than the 'ratio of complications' variable. The findings for the two interpreter conditions were similar, at least as far as the total accuracy rates are concerned.

Discussion

In the MS-absent condition, statements obtained in the interpreter present interviews contained fewer details than statements obtained in the interpreter absent interviews, whereas in the MS-present condition, interpreter absent and interpreter present interviews contained a similar amount of detail. This supports Hypothesis 1a, replicates previous research (Ewens et al., 2016d), and shows that interpreter-based interviews lead to less information but that this can be prevented by introducing a MS in such interviews.

The finding that in MS-absent interviews, the presence of an interpreter leads to less information is unfortunate as eliciting information is the core of an investigative interview (Fisher, 2010). A positive finding, however, is that in terms of lie detection, the presence of

an interpreter had no effect, as the ratio of complications was higher for truth tellers than for liars regardless of whether an interpreter was present or absent. Being able to discriminate between truth tellers and liars is another important aspect of investigative interviewing (Loftus, 2011). The difference between truth tellers and liars in the ratio of complications was somewhat more pronounced in the interpreter present condition than in the interpreter absent condition, a finding that we cannot explain, but it clearly shows that ratio of complications is a diagnostic cue to distinguish truth tellers from liars in both interpreter present and interpreter absent interviews.

Exposing participants to a MS showed, other than nullifying the negative effect of having an interpreter on eliciting details, two more important advantages in the present experiment. First, it resulted in more details. Other mnemonics have been found to lead to additional detail after free recall, for example context reinstatement (Colwell, Hiscock-Anisman, & Fede, 2013; Colwell, Hiscock, & Memon, 2002) but the benefit of a MS is that it is easy to implement in real life because the only task for the interviewer is to switch on the MS audiotape. A MS works better than a request 'to be as detailed as possible' (Leal et al., 2015), probably because a MS gives interviewees an example of what to do, whereas a verbal request to be detailed is just an instruction. It is easier to learn from examples than from verbal instructions. Although a MS resulted in more details it did not result in better discrimination between truth tellers and liars based on 'total details' as both truth tellers and liars reported more details after listening to the MS. This effect, a MS results in more details from both truth tellers and liars and, hence, not in a better discrimination between these two groups, replicates previous MS deception research (Bogaard et al., 2014; Ewens et al., 2016d; Leal et al., 2015).

Second, exposure to a MS research facilitated lie detection as the differences between truth tellers and liars in terms of complications, common knowledge details and ratio of

complications were more pronounced in the MS-present than in the MS-absent conditions. Thus, although a MS make both truth tellers and liars to report more details, it is the type of detail they additionally report that distinguishes the two groups. This is similar to Leal et al. (2015) who found that a MS did not enhance lie detection based on 'total detail' but did enhance lie detection based on the plausibility of these additional details.

A MS raises interviewees' expectations about how much detail is required in an interview. This could also result in some social pressure on truth tellers to provide more detail. Since people strategically regulate memory output balancing correct detail and confidence (Koriat & Goldsmith, 1996), this could lead to interviewees feeling pressure to provide details about which they are less confident that they are accurate, and that could lead to providing incorrect information. Our research paradigm does not allow us to test this hypothesis, because for this hypothesis ground truth is required about the events the interviewee describes, but future research should examine this important question.

Truth tellers and liars differed from each other in reporting complications, common knowledge details, and self-handicapping strategies, and in the ratio of complications reported. Although complications have been examined before (as part of the CBCA tool, Amado et al., 2015; Vrij, 2008), the other three variables are new in deception research. Common knowledge details and self-handicapping strategies are interesting as these are 'cues to deceit' (liars report them more often than truth tellers), whereas 'detail' and 'complications' are 'cues to truthfulness' (truth tellers report them more often than liars). In verbal lie detection tools, virtually all verbal cues that are examined are 'cues to truthfulness'. For example, in CBCA, all 19 verbal cues are cues to truthfulness, and in Reality Monitoring (RM), all cues except one are cues to truthfulness (Amado et al., 2015: Masip et al., 2005; Oberlader et al., 2016). The only cue to deceit in RM – cognitive operations- does not discriminate particularly well between truth tellers and liars (Masip et al., 2005; Vrij, 2008).

Using the Model Statement in Interpreter-based Interviews

The benefit of having a mixture of cues to truthfulness and cues to deceit is that a within-subjects score can be calculated (the ratio of cues to truthfulness can be calculated), with the expectation that truth tellers will obtain a higher ratio of cues to truthfulness than liars. That happened in the present experiment. On average, truth tellers included more cues to truthfulness in their statements (.72) than liars (.44), whereby a .50 score represents an exact balance between cues to truthfulness and cues to deceit. This within-subjects score was the most powerful discriminator between truths and lies in the current experiment, and is something practitioners are asking for. The difference in ratio of complications was substantial, particularly in the MS-present condition (d = 1.56). It is too premature to draw conclusions on a single study but the results show that examining the ratio of complications in MS-present interviews has clear potential for lie detection purposes (it also resulted in correct classification rates of 80% of truth tellers and 78% of liars).

To properly examine complications, common knowledge details and self-handicapping strategies it is important to use deception scenarios in which participants report self-generated truths and self-generated lies, so that these cues will appear spontaneously. In most deception research, truth tellers (and sometimes liars) are instructed to carry out specific tasks or to watch a film and to subsequently report their experiences. The limitation of such designs is that the number of complications is then determined by the stimulus material (straightforward tasks or watching a film do not generate many complications). This could well be the reason why complications are only weakly related to deception in CBCA research (Vrij, 2008), as in most of that research truths (and lies) are not self-generated.

Methodological Considerations

Four methodological issue merit attention. First, in the experiment truth tellers were given the opportunity to prepare themselves. We gave then this opportunity to avoid creating a confound between veracity and preparation, as we also gave liars the opportunity to prepare

themselves. Although asking truth tellers to prepare themselves increased the robustness of the experimental design someone may argue that this is not realistic as in real life truth tellers are unlikely to prepare themselves. We believe that the advantage of the experimental robustness outweighs this disadvantage, also because good interviewing involves giving interviewees plenty of opportunity to think about the event they are interviewed about (Fisher, 2010). In fact, this is what truth tellers did during their preparation: Most of them indicated that during the preparation they relied on their memories, feelings and photos they took. Neither did truth tellers give the impression that they needed much preparation: They rated their preparation as more thorough than liars (despite liars generally putting more effort into their preparations (Granhag, Hartwig, Mac Giolla, & Clemens, 2015) and fewer truth tellers than liars thought that they were given insufficient preparation time for the interview. Thoroughness of preparation and perceptions of the preparation time were included as covariates in the analyses and could thus not have affected the results.

Second, we cannot check whether the participants were actually telling the truth or lying. This is inherent to self-generated truths and lies and, again, we believe that the benefits of such truths and lies, described above, outweigh this disadvantage. We asked participants in the post-questionnaire to indicate honestly how much they told the truth during the interview and truth tellers indicated that they overwhelmingly did (95%). We have no reason to distrust this self-reported percentage. Interestingly, liars also reported to have told the truth to some extent (20%), which is in alignment with the deception literature, which revealed that liars prefer to embed their lies in truthful experiences (Leins, Fisher, & Ross, 2013).

Third, we asked questions about both the planning and the execution of the trip but did not made a distinction between these two types of question. It could be interesting to examine these types of question separately. Liars typically expect questions about the execution but not the planning of a trip, and planning questions typically reveal the most cues to deceit

(Granhag & Knieps, 2011; Knieps, Granhag, & Vrij, 2013a, b; Sooniste, Granhag, Knieps, & Vrij, 2013). For example, Knieps et al. (2013a) found that truth tellers' answers about planning were longer, more detailed, more plausible and clearer than liars' answers, whereas no difference emerged between truth tellers and liars when answering the questions about the execution of the intentions. To examine this issue fairly, an interview protocol needs to be designed that results in answers to the planning and execution questions which are of similar length. Future research could deal with this.

A final point is that making a trip is arguably a somewhat scripted activity, which makes common knowledge details likely to occur. The question arises whether common knowledge details also occur when liars describe more unique events. This is a relevant question for future research.

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Table 1. Ms, SDs and CIs as a Function of Veracity (Main effect) and Veracity X Model Statement (Interaction effect)

	Truth			Lie		
	M	SD	95% CI	M	SD	95% CI
Total detail	352.97	290.95	311.79,397.92	244.69	123.62	201.09,286.77
Complications	11.13	13.10	9.30,13.06	4.77	4.42	2.91,6.65
Complications-MS-absent	7.72	6.78	5.64,8.80	4.14	3.97	2.54,5.70
Complications-MS-present	15.14	16.47	5.64,8.80	5.40	4.78	2.54,5.70
Common knowledge details	2.61	2.17	2.14,3.01	3.71	2.37	3.30,4.18
Common knowledge details – MS-absent	2.94	2.26	2.35,3.61	3.48	2.32	2.81,4.07
Common knowledge details – MS-present	2.26	2.03	1.54,2.80	3.94	2.44	3.41,4.65
SHS	0.24	0.52	0.09,0.38	0.79	0.89	0.65,0.94
Ratio of complications	0.72	0.25	0.67,0.77	0.44	0.25	0.39,0.49
Ratio of complications-MS-absent	0.64	0.25	0.57,0.71	0.43	0.26	0.37,0.51
Ratio of complications-MS-present	0.80	0.22	0.72,0.86	0.44	0.24	0.38,0.52

Note: MS means model statement and SHS means Self-Handicapping Strategies

Table 2. Ms, SDs and CIs as a Function of Model Statement (Main effect) and Model Statement X Interpreter (interaction effect)

	MS-present			MS-absent		
	M	SD	95% CI	M	SD	95% CI
Total detail	356.58	276.35	314.82,400.91	241.12	150.59	198.09,283.74
Total detail – interpreter absent	378.27	338.46	301.92,461.40	275.52	178.86	231.66,314.90
Total detail – interpreter present	335.32	198.96	253.07,410.92	206.72	106.82	167.34,250.58
Complications	10.22	12.97	8.39,12.15	5.67	5.74	3.82,7.55
Ratio of complications	0.62	0.29	0.56,0.67	0.54	0.28	0.48,0.60

Table 3. The results of the discriminant analyses.

	Truth %	Lie %	Total %	X2(1)	Wilk's Lambda	p	Canonical correlation
RATIO OF COMPLICATIONS							
MS-absent: Ratio of complications	66	68	67	15.55	0.85	< .001	.38
MS-Present: Ratio of complications	80	78	79	44.13	0.63	< .001	.61
INTERPRETER-ABSENT							
MS-absent: Ratio of complications	56	68	62	5.85	.884	.016	.34
MS-Present: Ratio of complications	75	76	77.5	11.64	.78	.001	.47
INTERPRETER-PRESENT							
MS-absent: Ratio of complications	64	76	70	10.07	.809	.002	.44
MS-Present: Ratio of complications	88	80	84	34.90	.480	< .001	.72
TOTAL DETAIL							
MS-absent: Detail	50	76	63	8.28	0.92	.004	.29
MS-present: Detail	43	70	56.5	5.77	0.94	.016	.24
INTERPRETER-ABSENT							
MS-absent: Detail	56	72	64	3.38	.931	.066	.26
MS-present: Detail	33	80	56.5	3.03	.937	.081	.25
INTERPRETER-PRESENT							
MS-absent: Detail	52	68	60	6.99	.863	.008	.37
MS-present: Detail	52	72	62	3.04	.938	.081	.25

Note: MS means model statement

[1] This is not the same as the number of truth tellers and liars who included at least one self-handicapping strategy in their statement. A total of 20% of truth tellers and 55% of liars did so, and this difference was significant. $X^2(1, N = 199) = 25.65$, $p < .001$, *phi* = .36.