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The Lies we Live: Using the Verifiability Approach to Detect Lying about Occupation

Louise Jupe

Aldert Vrij

Sharon Leal

Samantha Mann

Department of Psychology, University of Portsmouth, UK

Galit Nahari

Department of Criminology, Bar-Ilan University, Israel

It is estimated that 40-70% of applicants lie or embellish on their curriculum vitae. The employment of individuals without the necessary skills or qualifications may be detrimental to industry. This study investigated participants who were asked to lie and tell the truth about their occupation in three conditions: chosen lie, forced lie and truth. Transcripts were analysed using the Verifiability Approach, which identifies checkable detail within suspect's statements. Although it was hypothesised that liars would provide fewer verifiable details than truth tellers in their verbal statements, the Verifiability Approach was unable to distinguish between truthful and deceptive statements. The discussion highlights reasons as to why the approach was unsuccessful and suggests methods to enhance its usability in future studies.

Keywords: identity, identity deception, verifiability approach, occupation deception

Corresponding author:

Louise Jupe, Department of Psychology, University of Portsmouth, King Henry Building, King Henry I Street, Portsmouth, PO1 2DY. UK. louise.jupe@port.ac.uk. T: +44 2392 846614

Research into the detection of deception within legal and forensic psychology has been predominantly focused within criminal settings, often involving a ‘police-suspect’ interview, with a ‘suspect’ lying or telling the truth about their past activities (Vrij & Granhag, 2014). What is less common within deception literature is that of lying about ‘occupation.’ Occupation deception may have important consequences within security and intelligence settings (Mann et al., 2013): Are an undercover agent and informant actually who they say they are? Do they have the correct qualifications or experience to hold such a position?

What is Identity?

DePaulo and Bond (2012) have highlighted that in addition to lying about transgressions, many individuals lie about their identity. Identity may represent how one’s self is viewed both internally (e.g., who am I and what do I represent?) and externally by others (e.g., how one is perceived by others). For the purpose of this research, identity relates to that which differentiates an individual as unique from others, such as the information found on a passport, his/her education, his/her qualifications, his/her occupation and his/her experiences. Research into lying about identity does not appear to be readily available, yet its significance is of concern, with an estimated £1.5 billion lost each year to identity related crimes (e.g., identity theft, identity deletion and identity creation) in the UK alone (Wall, 2013). Whilst our identity can be identified as global (ideological identity), occupation is identified as domain-specific (Goossens, 2001). As our occupation forms a domain-specific part of our global identity, occupation has associated links with identity deception. Lying about identity is of vital importance to immigration and terrorism, with false identity documents indicated as a contributor to the national security breaches in the United States of America preceding the 9/11 terror attacks (Salter, 2004). The FBI acknowledged that many of the hijackers in the attack used false identities (Hopkins, 2001). In addition, false identities are related to numerous maritime terrorist attacks (Luft & Korin, 2004), human trafficking (Elliott, 2015) and deception within the medical field (Gore, 2014), adding further evidence to the wide scale problem of false identity. False identities may also pose detrimental in the workplace (Hinds, 2007). Individuals employed under the pretence of acquired qualifications may not only jeopardise organisational performance but may also pose a threat to society; such as those involved in medicine (Venner, 2007).

Deception In The Workplace

Occupation deception often occurs before the start of employment with applicants using fake documents which, when combined with an overall poor ability to detect deception, can be used to a deceiver’s advantage (Hogue, Levashina, & Hang, 2013). It is suggested that 40-70% of applicants lie or embellish on their curriculum vitae and 36% of organisations have ceased an individuals employment due to lying during their application process (Wood, Schmidtke, & Decker, 2007). Dishonesty within the workplace has been identified within academia and media portrayals as significantly corrupt and is deemed an area of importance for researchers (Hogue et al., 2013).

Lying About Our Occupation Means Lying About Our Identity: The Distinctiveness of Such Untruths

Lying about occupation essentially requires the deceiver to lie about an aspect of his/her identity and therefore involves a somewhat complex process. An individual no longer has to lie about what he or she did, but who he or she is. Lying about identity is comprised of a number of factors. When an individual lies about his/her identity, it involves lying about his/her autobiographical memory (Sartori, Agosta, Zogmaister, Ferrara, & Castiello, 2008), which means that an individual would need to be dishonest about where s/he lives, whom s/he lives with, what his/her occupation is, where s/he went to school, his/her interactions with individuals and even his/her thoughts and feelings (Vrij, Mann, Leal, & Fisher, 2012). Wilson (2003) states that our identity is solely comprised of experienced autobiographical memories and thus affects how we recall our past. For liars, such experiences need to be 'overridden' to provide an account of a different individual. It is possible, therefore, that lying about occupation is more difficult than lying about small misdemeanours regarding whereabouts or activities, when identity remains true. With some managerial occupations dominating, on average, up to 60 hours of a 168-hour week (Brett & Stroh, 2003), 35% of our identity may be involved within our 'occupation.' Therefore it may be appropriate to start explorative study into lying about identity by looking at occupation.

The Verifiability Approach

Identifying truthful accounts from deceptive ones is difficult and verbal and non-verbal cues to deceit are typically faint and unreliable (DePaulo et al., 2003). Skilled deceivers are able to manipulate their behaviour to 'fit' that of a credible individual, which often means identifying deception is no better than chance (Bond & DePaulo, 2006). Lie detection has been examined from a variety of different approaches, including behavioural cues (DePaulo et al., 2003), analysis of contextual parts of language such as criteria-based content analysis (CBCA) (Vrij, 2005) and with advancing technology including event-related potentials (ERP) (Proverbio, Vanutelli, & Adorni, 2013).

Some analyses of speech content has shown to be promising within deception detection (e.g., Statement Validity Analysis [SVA] and Reality Monitoring [RM] (Vrij, 2015)). A recent development is a verbal veracity assessment tool called the Verifiability Approach (VA), introduced by Nahari, Vrij, and Fisher, (2014a). It works on the premise that truth tellers are more likely to provide detail that may, in principle, be verifiable (e.g., 'I called the bank at 3.30pm') than liars. When applied, the VA may allow investigators to evaluate 'on-the-fly' how much of the interview is likely to be true (by judging how much of the statement is verifiable) and, as such, may show to be beneficial within identity related deception. Therefore, the VA was applied to deceptive and truthful transcripts of individuals who lied or told the truth about a significant constituent of their identity; their occupation.

The VA is a strategy-based approach, which manipulates the dilemma liars are faced with when providing statements (Nahari, Vrij, & Fisher, 2014a). Whilst liars may be aware that providing a statement rich in detail can form a more honest impression, they are also faced with risks of providing such detail. Investigators are likely to verify detail that has been provided, and therefore liars may avoid providing such detail. A strategy amongst

liars is to provide unverifiable detail that may allow a statement to appear rich in detail but without the added jeopardy of having such detail checked (Nahari, Vrij, & Fisher, 2014a). This strategy links to the theoretical perspective of attempted control (Vrij, 2008). Liars are more likely to avoid self-incriminating statements, and achieve this by providing as little detail as possible which may be indicative of deceit. By providing unverifiable detail, the suspect is tactically avoiding providing incriminating evidence.

The VA has been examined in five studies thus far. The initial study (Nahari, Vrij, & Fisher, 2014a) examined written statements of truth tellers and liars about their activities during a previous 30-minute period and found that truth tellers provided significantly more verifiable detail. Furthering this study, alibi witness statements (non-criminal activities were carried out by pairs of truth tellers, however pairs of liars were separated with one of the pair carrying out non-criminal activities whilst the other partook in a mock crime and during their interview liars had to pretend that they both carried out the non-criminal activity together) were also analysed with the VA (Nahari & Vrij, 2014), which again showed that truth tellers provided more verifiable detail than liars. The VA approach has also been applied to insurance claim interviews (Nahari, Vrij, Leal, Warmelink, & Vernham, 2014). Whilst the approach was unable to identify truth tellers, it was able to detect liars. Furthermore, to investigate how well the VA would work when a ‘countermeasures tactic’ was applied, in a further study half of the participants were informed of the VA prior to interview (Nahari, Vrij, & Fisher, 2014b). The results showed that the approach encouraged informed truth tellers but not informed liars to provide more verifiable detail. As such it enhanced the difference between truth tellers and liars in mentioning verifiable detail and enhanced its discriminatory component. The approach has also examined the creation of false verifiable detail in suspect statements (Nahari & Vrij, 2015). Participants were able to plan, in advance, how they would strategically use verifiable details whilst either interviewed about a theft at a plausible location (an open café) or a somewhat more difficult location (a closed bank). The findings suggested that individuals in the café condition were able to provide 30% more verifiable details than those in the bank condition. This suggests that the creation of false verifiable details is dependent on the scenario. Whilst the VA is a promising approach to the detection of deception, it has not yet been applied to individuals who lie about their identity.

Familiar Vs. Unfamiliar Lies

Research has demonstrated that the familiarity of a lie (or event) affects the ability of veracity tools to differentiate between truthful and deceptive discourse (Steller, Wellershaus and Wolf, 1988; cited in Steller, 1989; Pezdek et al., 2004). For example, CBCA is more likely to be able to differentiate between true and false events, which are unfamiliar to the story-teller than between true and false which are familiar to the story-teller (Pezdek et al., 2004). Familiarity may allow an individual to embed lies within actual previous experience or knowledge regarding the deceptive event (Vrij, 2008). The current study therefore looked at verifiable detail between three conditions; truth tellers, chosen lies and forced lies. Chosen lies are those which the individual is more familiar with, whilst forced lies relate to lies which they are instructed to tell. Since we are unable to predict why familiarity with the topic would affect the number of verifiable detail someone can give, we do not expect chosen or forced lies to differ in the amount of verifiable detail an individual provides.

The Current Study

The current study used transcripts collected for Vrij et al. (2012). In this study, participants were asked to lie and tell the truth about their occupation within three conditions: a chosen lie (of their choosing), a forced lie (of the experimenters choosing) and the truth. Since the transcripts from the three conditions were not coded for verifiable detail, they were deemed appropriate to be analysed in the current study. Each participant was asked a variety of questions about their occupation, remaining the same across all three conditions. The aim was to be able to differentiate between truthful and deceptive accounts of their occupation as a facet of their identity.

Hypotheses

Hypothesis 1: Truth tellers will provide more verifiable detail than chosen and forced liars.

Hypothesis 2: The percentage of verifiable detail (perceptual, spatial and temporal) will be higher for truth tellers than for chosen and forced liars.

Hypothesis 3: Liars will provide more details when their lies are chosen than when they are forced, but there will be no difference between the chosen and forced lies in terms of verifiable detail.

Method

Participants

Originally, 33 participants took part but we removed two participants from the data set for not answering the questions as specified. The remaining 31 participants (13 males and 18 females) between 18 and 61 years of age ($M = 33.74$ years, $SD = 1.4$) took part in the experiment. Their occupations varied: teacher/lecturer ($n = 9$), administrator/secretary ($n = 9$), salesperson ($n = 2$), shop worker ($n = 3$), editor ($n = 2$), airline/helicopter pilot ($n = 2$), engineer ($n = 1$), probation officer ($n = 1$), social worker ($n = 1$) and swimming instructor ($n = 1$).

Procedure

Recruitment.

The procedure for Vrij et al. (2012) was as follows. Emails were sent to potential participants (known by the researchers [Vrij et al., 2012] as friends or acquaintances) who were in full-time employment, informing them that an experiment was to run which was to investigate aspects of lying about identity. Participants were informed that for their participation -in which they would be asked to tell the truth or lie about their own full-time occupation- they would receive £20. Times and dates of the experiment were also given.

The majority of potential participants stated that they would like to partake in the study. For these potential participants, a Selection Form was emailed to them. The form contained basic instructions for the study and a list of 16 occupations (including those of

the participants) with a request for them to indicate on a Likert scale, how much they knew about each of the jobs, ranging from 1 (*I know very little about this occupation*) to 7 (*I know a lot about this occupation*). Jobs included 'hairdresser,' 'gardener,' 'veterinarian' and 'accountant.' After the Selection Forms were received back from participants, the participants were emailed and told that they would be interviewed three times: once regarding their actual employment (truth), once about an occupation from a selected list (chosen lie) and once about an occupation we would choose for them to lie about (forced lie). For the chosen lie condition, participants were asked to lie about an occupation of their choice from the list on the selection form they had completed. When we gave the participants a forced lie occupation (a score of 1 or 2 on the Likert scale), it was always one they had indicated knowing very little about when they completed the Selection Form. Participants were given at least one week's notice of the occupation in which they were supposed to lie. This allowed the participants preparation time before the interviews. They also received at least one week's notice of the date and time of the interviews.

Pre-interview questionnaire.

Once the participants had arrived in the Psychology Department, an experimenter welcomed them and also asked them to complete a pre-interview questionnaire. This questionnaire asked the participants their age and gender and their level of motivation to perform well during the interview (indicated on a Likert scale from 1 (not at all motivated) to 5 (very motivated)). Participants were also asked if they had done anything to prepare for this interview. If not, we asked them why not and if so we asked them what it was that they had done to prepare. The findings are not analysed in the current study, but the findings of Vrij et al., (2012) show that participants reported high levels of motivation on a five-point Likert scale ($M = 4.09$, $SD = 0.63$) and truth tellers and liars were equally motivated with 90% (30 out of 33) stating they were 'motivated' or 'very motivated.' Only 18% (three participants) stated they had prepared themselves for the truthful interview, whilst 12 participants (75%) had done so for the deceptive interview. The three participants who had prepared themselves for the truthful condition stated that they had thought of possible questions and answers. Those who did not prepare indicated they felt preparation was unnecessary ($n = 12$) as they could use their own knowledge or that they did not know what sort of questions would be asked ($n = 2$). The difference in the preparation was significant ($\chi^2(1, n = 33) = 10.94$, $p < 0.01$). The participants in the deceptive interview stated that they had prepared themselves for the interview by checking the yellow pages or the internet ($n = 6$), practicing possible questions and answers ($n = 3$), talking to somebody with the same job ($n = 1$), went to a relevant workplace and observed what the workers were doing ($n = 1$) or thinking about one of their previous jobs ($n = 1$). Those who had not prepared for the deceptive interview stated that they had planned to prepare but something else came up ($n = 1$), that they felt they would know enough about the job ($n = 1$) and that they were unable to do enough research ($n = 1$).

The interview.

After the pre-interview questionnaire, each participant was interviewed three

times in succession. The order of the interviews (truth, forced lie and chosen lie) was counterbalanced. The interviewer was blind to the actual occupation of the interviewee. In each of the three interviews, the interviewer asked the following four questions, allowing time for a response after each question: (1) 'Please describe your place of work in as much detail as you can. Do you have your own office or office space? Can you describe where you desk is, your colleagues desks, kitchen and toilets?' (2) 'There must be one single experience in your occupation that must stand out – what is that? What happened?' (3) 'Can you describe what you do in a typical day, hour by hour?' and (4) 'Can you tell me about a recent interaction or event that you were involved in within the last week that occurred in your workplace? Just something that springs to mind, but doesn't have to be out of the ordinary, but please do describe it in detail.' During the interview, the questions were always asked in this order. The questions allowed for two sets of data to be analysed; the four questions combined to provide overall verifiable and unverifiable detail, and each question individually. After completing the questionnaire, the participants were given a debriefing form and also £20 for their participation.

Transcripts

The current study used the transcripts derived from a study published in Vrij et al. (2012).

Verifiable detail coding

The interviews were coded by an independent coder (blind to the veracity status of each interview). The statements were coded for verifiable detail, relating to three of the eight RM criteria (Sporer, 2004); spatial, perceptual and temporal detail. Spatial detail refers to details that describe a location of objects or individuals ('My office door was third on the left,' 'I was by the nearside of the photocopier'). Perceptual detail refers to individual actions or observation (eating a sandwich, photocopying a book from the library and descriptions of objects or people). Temporal information relates to details that are provided about the exact time, duration and order of an activity ('I left the office at 2pm,' 'I walked into the laboratory after I had finished the cigarette' and 'It took me 15 minutes to fix the puncture'). Emotions ('I was upset that I missed the meetings) and cognitive reasoning ('It was cold that morning so I must have been wearing my jacket') are not included as detail in the VA as they cannot be verified (Nahari, Vrij, & Fisher, 2014a). The remaining three criteria of the RM (clarity, reconstructability and realism) evaluate the statement as a whole and do not relate to the verifiability of detail and thus were also not included (Nahari, Vrij, & Fisher, 2014a). The coder identified all of the spatial, perceptual and temporal details and also noted the frequency of the occurrence of these variables. For example the following sentence, 'The lady in the pink dress stood next to me,' includes three perceptual details ('lady,' 'pink' and 'dress') and one spatial detail ('next to me'). The coder also identified if these details were verifiable or unverifiable. For example, 'I sent an email at 3.30pm' is a verifiable detail (we can check an email system for sent emails), whereas 'As I crossed the road, I lit a cigarette' is unverifiable. We have no way of confirming if this is in fact true. The three types of detail (spatial, perceptual and temporal) were merged into one category

‘total detail.’ This is appropriate because we have no specific hypotheses about these three types of detail.

Inter-rater reliability.

A second coder, also blind to the veracity status of the interviews, coded 24 of the 93 interviews (25.81%). The inter-rater reliability scores were high: verifiable detail [ICC] = .994, unverifiable detail [ICC] = .962 and total detail [ICC] = .994.

Results

Verifiability

Interviews in their entirety.

To test if truth tellers provided more verifiable detail in their entire statements than liars (Hypothesis 1), data was subjected to two one-way repeated measures ANOVAs with the following dependent variables: (1) *verifiable detail* and (2) *unverifiable detail*. The independent variable was Veracity (truth, chosen lie and forced lie). The one-way repeated measures ANOVA for verifiable detail was not significant $F(2, 60) = 1.03, p = .362, \eta^2 = .03$, thus truthful ($M = 75.06, SD = 36.61, 95\% CI [62.37, 87.76]$), chosen lie ($M = 75.67, SD = 35.10, 95\% CI [62.80, 88.55]$) and forced lie ($M = 67.19, SD = 26.04, 95\% CI [57.64, 76.75]$) did not differ in the amount of verifiable detail. The one-way repeated measures ANOVA for unverifiable detail was not significant either, $F(2, 60) = 1.22, p = .301, \eta^2 = .03$, thus truthful ($M = 5.45, SD = 6.64, 95\% CI [3.01, 7.87]$), chosen lie ($M = 4.35, SD = 4.76, 95\% CI [2.61, 6.10]$) and forced lie ($M = 3.42, SD = 5.46, 95\% CI [1.42, 5.42]$) did not differ in the amount of unverifiable detail. Hypothesis 1 is therefore not supported.

Although the ANOVAs were not significant we carried out more detailed analyses examining possible differences between the truth condition and forced lie and chosen lie conditions. Paired sample *t*-tests were applied to the data. There was no significant difference between truths and forced lies in *verifiable detail*, $t(30) = 1.25, p = .222, d = 0.26$, *unverifiable detail*, $t(30) = 1.73, p = .094, d = 0.23$, and *total detail*, $t(30) = 1.65, p = .110, d = 0.29$. Neither was there a significant difference between truths and chosen lies in *verifiable detail*, $t(30) = -.104, p = .918, d = 0.02$, *unverifiable detail*, $t(30) = .804, p = .428, d = 0.19$ and *total detail*, $t(30) = .074, p = .941, d = 0.01$. To allow for exploration for Hypothesis 3, paired sample *t*-tests were applied to the data for forced and chosen lies. There was no significant difference between forced and chosen lies in *verifiable detail*, $t(30) = 1.14, p = .263, d = 0.27$, *unverifiable detail*, $t(30) = .69, p = .495, d = 0.09$ and *total detail*, $t(30) = 1.26, p = .216, d = 0.30$. Hypothesis 3 is therefore not supported.

To test if truth tellers had a higher percentage of verifiable detail in their statements than liars (Hypothesis 2), data was subjected to a one-way repeated measures ANOVA with *verifiable detail as a percentage of total detail* as the dependent variable. The independent variable was Veracity (truth, chosen lie and forced lie). The one-way repeated measures ANOVA for *verifiable detail as a percentage of total detail* was not significant, $F(2, 60) = .351, p = .705, \eta^2 = .012$ thus truthful ($M = 93.74\%, SD = 6.29\%, 95\% CI [91.44\%, 96.04\%]$), chosen lie ($M = 94.37\%, SD = 6.24\%, 95\% CI [92.09\%, 96.67\%]$) and forced lie ($M = 95.11\%, SD = 7.82\%, 95\% CI [92.25\%, 97.99\%]$) did not differ in the amount of verifiable detail

as a percentage of total detail. Therefore, Hypothesis 2 is not supported.

Although the ANOVAs were not significant we carried out more detailed analyses examining possible differences between the truth condition and forced lie and chosen lie conditions. Paired sample *t*-tests were applied to the data. There was no significant difference between truths and forced lies in *verifiable detail as a percentage of total detail*, $t(30) = -.815$, $p = .422$, $d = 0.10$. Neither was there a significant difference between truths and chosen lies in *verifiable detail as a percentage of total detail*, $t(30) = -.437$, $p = .665$, $d = 0.15$ or between chosen and forced lies in *verifiable detail as a percentage of total detail*, $t(30) = -.419$, $p = .679$, $d = 0.03$.

Individual questions analysis.

To test if truth tellers provided more verifiable detail within each individual question than liars, the statements were broken down into the four questions and for each question the data was subjected to two one-way repeated measures ANOVAs with the following dependent variables: (1) *verifiable detail* and (2) *unverifiable detail*. The questions were analysed individually to explore differences between each question. For example, (Q1) questions which ask about visual stimuli which might be easier for a liar to answer than some of the other questions, (Q2) which are more specific to the experience or (Q3) related to mechanics and (Q4) the personal interaction aspect of the interviewees occupation. The independent variable was Veracity (truth, chosen lie, forced lie). Furthermore, to test if truth tellers had a higher percentage of verifiable detail in their statements than liars, each question was subjected to a one-way repeated measures ANOVA verifiable detail as a percentage of total detail as the dependent variable. The independent variable was Veracity (truth, chosen lie and forced lie). The findings did not reveal significance in any of the analyses. This was found in individual analyses for verifiable detail, unverifiable detail and *verifiable detail as a percentage of total detail* for each of the four individual questions. The results are summarised in Table 1.

Discussion

The present study investigated the use of the VA when individuals lied or told the truth about a facet of their identity: their occupation. Although the VA has shown to be successful in identifying deceptive statements in previous research (Nahari, Vrij, & Fisher, 2014a, 2014b; Nahari, Vrij, Leal, et al., 2014; Nahari & Vrij, 2014), in the current study it failed to differentiate between deceptive and truthful statements regarding occupation. The data was examined in two ways, by grouping four questions together as an entire interview, and then with each question individually to try to differentiate between question types. When the data was analysed as a whole, the VA, as a tool to discriminate between truth tellers and liars, was not significant. Furthermore, when the questions were analysed individually, the VA also failed to be able to identify truth from lie. The VA was also unable to differentiate between forced and chosen lies, suggesting that unfamiliarity of an occupation did not affect the verbal responses given in terms of verifiable detail.

A number of reasons are suggested as explanations for the findings. The current study facilitated the use of an existing dataset (Vrij et al., 2012) which was not explicitly obtained with the aim of using the VA as a method of deception detection. Therefore the specific instruction to ask interviewees to provide verifiable detail (the 'information

Table 1: Results for Q1, Q2, Q3 and Q4; One-way repeated measures ANOVA for Verifiable Detail, Unverifiable Detail and Verifiable Detail as a percentage of Total Detail

	<i>F.</i>	<i>P.</i>	Truthful <i>M (SD)</i>	Chosen <i>M (SD)</i>	Forced <i>M (SD)</i>
Q1 VD.	1.01	.857	28.39 (12.35)	28.71 (17.27)	27.55 (10.11)
Q1 UVD.	6.77	.457	.13 (.43)	.16 (.74)	.03 (.18)
Q1 VD%Total.	.918	.405	99.51% (1.85%)	96.67% (1.85%)	99.89% (17.95%)
Q2 VD.	1.48	.234	8.42 (7.57)	11.29 (8.46)	8.90 (7.85)
Q2 UVD.	.842	.416	51.39 (2.49)	.48 (1.15)	1.13 (3.90)
Q2 VD%Total.	1.23	.298	74.07% (39.58%)	88.17% (27.53)	80.17% (37.84%)
Q3 VD.	.482	.620	24.13 (16.71)	25.26 (15.49)	22 (15.49)
Q3 UVD.	1.00	.374	2.74 (4.96)	2.39 (3.69)	1.56 (3.56)
Q3 VD%Total.	1.33	.813	90.90% (10.55%)	90.96% (14.51%)	89.12% (24.95%)
Q4 VD.	1.46	.240	12.84 (10.93)	10.45 (8.22)	9.70 (6.20)
Q4 UVD.	2.51	.090	1.20 (2.00)	1.32 (2.31)	.42 (1.10)
Q4 VD%Total.	1.20	.307	84.46% (30.02%)	78.98% (33.90%)	90.52% (25.37%)

VD. = Verifiable Detail. UVD. = Unverifiable Detail.
 VD%Total. = Verifiable Detail as a percentage of Total Detail.
F. = *f* value. *P.* = *p* value.

protocol,' Harvey et al., in press), which enhances the discriminatory ability of the VA, was not used. This may have thus affected the verifiable detail that was provided in interviewee statements as research has shown that by informing the participants of the VA, it actually facilitates lie detection because it encourages truth tellers, but not liars, to include more verifiable details in their statements (Nahari et al., 2014).

Comparisons also need to be drawn between the experimental condition of the current study and real life. Individuals within an experiment are unlikely to believe that their statements would actually be checked and verified. As a speculation, liars in the current study may have adopted a story telling approach, and as such would have been able to fabricate verifiable details 'on the fly.' However, in an actual recruitment scenario they may be more reluctant to do that because they may expect interviewers to check (some of the detail they provided).

Perhaps the use of embedded lies hampered detection via the VA method. One of the questions asked the individuals to visually describe their place of work ('Please describe your place of work in as much detail as you can. Do you have your own office or office space? Can you describe where your desk is, your colleagues desks, kitchen and toilets?'). For example, a teacher would have been asked to describe their classroom, staffroom etc., and the VA would have identified which aspects of their description could be verified. When an individual is asked to lie about visual descriptions of a location they have stated

they were at (but were actually not at the time of interest) they may in fact describe the location based on memory from a previous visit to that location, and, subsequently, describe a previous experience rather than an outright fabrication. This is supported by the findings of Leins, Fisher and Ross (2013) who found that when liars were asked about their strategies regarding a deceptive event, up to 87% stated that they described a previously experienced event rather than a fabricated one. This may also be true for the familiarity of the lies as participants were not only asked to lie about an unfamiliar job role, but also that of a familiar one. As there were no significant differences between forced (unfamiliar) and chosen lies (familiar) even in the total number of detail, the act of preparing may have allowed for an invented familiarity with the position to occur. If we apply the VA to such statements, the approach may be unsuitable as a tool to differentiate between truths and lies in this context and therefore may shed light on why the VA was unable to differentiate between veracity in Question 1. It may have also contributed to the overall failure of the approach to work with the current dataset. It may be that liars used embedded lies as a method of providing detail, which to a coder is deemed verifiable, for example by recalling incidences, which took place within their current or previous employment and using these memories to provide a rich account. The difficulty observed within the current, yet limited literature, is that lies regarding identity are often embedded or partial lies (Wang, Chen, & Atabakhsh, 2004). Liars often use these types of lies because they are a) easy to tell and b) harder for interviewers to identify, as they may contain a high number of quality details that gives an inaccurate impression that the statement is truthful (Vrij, 2008).

The current dataset may make it difficult for the VA to correctly identify truth, which relies on the quantity and quality of detail, and the use of embedding will hamper lie detection efforts (Vrij, 2008). As per the findings of Nahari and Vrij (2015) individuals who were asked to provide verifiable details regarding a theft from a café which was open at the time of the transgression were able to provide 30% more verifiable details than for those who were asked to provide such details relating to a theft from a closed bank. This suggests that the request to provide verifiable detail in the current experiment was not suitable as interrogation strategy as it did not discourage the use of embedded lies. A limitation of the current study could be its sample size. This is often an issue when recruiting a motivated non-student sample as per the current study (Vrij et al., 2012).

Future Studies

If we wish to use the VA to investigate individuals who lie about their occupation as a facet of identity, then future designs should take into account the findings of previous studies, specifically those which include informing the interviewees that the interviewer will be looking for verifiable detail and as such, to include it within every answer (Nahari et al., 2014). This method may allow for the VA to be more successful in differentiating between truth tellers and liars when discussing their occupation. Many of the participants were able to give very detailed accounts of false experiences from their chosen and forced occupations. Whilst the VA was unable to differentiate in this case, the findings may indicate that emphasis should be placed upon the questions that are asked in order to elicit answers, which provide more in terms of differentiation (Vrij & Granhag, 2012). If participants know in advance what it is that they are going to be asked to lie about, their answers are more likely to be similar in terms of detail, to that of a truth teller. Asking unexpected questions may be advantageous by manipulating the unprepared state of the liar (Warmelink et al.,

2013; Vrij & Granhag, 2012; Shaw et al., 2013). In the current study, asking participants about events which preceded or occurred after the target event may have helped to elicit differentiations with their truthful and deceptive discourse. This may be beneficial in future studies.

Future studies should also consider the method of statement collection. In the current study the participants gave verbal answers. Asking participants to write down their answers to the questions and to include verifiable detail may give truth tellers an advantage. The increased time associated with writing a statement might allow truth tellers to recall and recite more verifiable detail than liars, who may struggle to provide verifiable detail in their statement. Such an approach may enhance the facilitative effect of a countermeasures approach.

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