LINGUISTICS AND DECEPTION DETECTION (DD): A WORK IN PROGRESS

Abstract. Linguistic Deception Detection DD is a well-established part of forensic linguistics and an area that continues to attract attention on the part of researchers, self-styled experts, and the public at large. In this article, the various approaches to DD within the general field of linguistics are examined. The basic method is to treat language as a form of behaviour and to equate marked linguistic behaviour with other marked forms of behaviour. Such a comparison has been identified in other fields such as psychology and kinesics as being associated with stress linked to the attempt to deceive, typically in such contexts as examined here. Representative authentic examples of some of the most common linguistic indicators of deception that have been identified are discussed, dividing them into two general categories which we here introduce: language as revealor and language as concealer. We will argue that linguistic analysis for DD should be conducted relative to the subject’s individual linguistic patterns of behaviour, not on absolutes related to broad generalisations about what is supposedly normal or unmarked in the population at large. We will also briefly discuss some structured methods for linguistic analysis for DD and the prospect that technology and artificial intelligence will provide the means to automate and digitalise the linguistic DD process. We maintain that caution is advisable when considering these, as DD will, in all probability, always remain a work in progress, with the need for a flexible human evaluator ready to take into account many different aspects of the individual subject and the case in question.

Keywords: Deception Detection, Forensic Linguistics, Linguistic Analysis.

1. Introduction

One of the areas of forensic linguistics that perhaps excites most interest on the part of the non-expert is that which is applied to Deception Detection (DD). Forensic linguistics is a broad area of language study which comprises a collection of different insights and approaches that have un-
doubtedly been around for a long time: for as long as people have analysed
the words of others to retrieve additional information beyond their literal
meaning. In the last fifty or so years, these instincts, techniques and hunches
have become grouped together and studied more systematically. Today, they
provide an important tool in the hands of such people as law enforcement
officers and legal practitioners the world over. Methods drawn from all areas
of linguistics, in particular, fields like pragmatics (the study of meaning in
context) and psycholinguistics (the relation between the psychological and
neurobiological factors that enable the acquisition, use, and understanding
of language) allow one, in an objective and scientific manner, to analyse
language to see what can be uncovered over and beyond the literal meanings
of the words used or the explicit communicative functions performed by the
utterances themselves.

In this article, we look at the various approaches to DD within the
general field of linguistics and discuss some of the most common linguistic
indicators of deception that have been identified. Where possible, we will
use authentic examples. As an introduction to the general theory behind
the various approaches, we will briefly discuss language viewed as a form
of behaviour (§ 2). After that, we will organise our discussion of linguistic
indicators of deception around the two broad themes of language as revealerm
and as concealer (§§ 3 and 4). We will then tie these together by examining
the concept of markedness (§ 5). Finally (§ 6), we will make some comments
about structured methods for linguistic DD and the implications that these
may have in the future as the field becomes more digitalised and comes
to make use of artificial intelligence.

2. Language as a form of behaviour and behaviour as an indicator
of deception

The fascination of Deception Detection (DD) to both expert and non-
expert lies in the prospect that there may exist proven techniques to spot
when someone is being deceptive. Language can be seen on one level as
an aspect of human behaviour. In the same way that a person’s body
language may reveal their innermost thoughts, the words that someone
uses (or avoids), how they respond (or fail to respond) to certain linguistic
prompts, and the way that they structure their discourse (the weight they
give to certain aspects, as well as those aspects that they neglect to mention
or pass quickly over) can all be used as indicators of how truthful or sincere
they are being.
In the popular imagination, there have long existed various supposedly
tell-tale signs in human behaviour, particularly in body language, that will
show when all but the most accomplished liars are at work; for example, not
looking one’s interlocutor in the eye, touching one’s nose, stammering, looking
up towards one side rather than another (e.g. rightwards in the case of
a right-handed person).\(^6\) Unfortunately, some people are excellent liars and
can, either by practice or by intuition, emulate the behaviour of honest peo-
ple very convincingly – at least to observers who do not know the subject
in question well. In fact, intuitive methods of lie detection, whether they
rely on body language or linguistic clues, though still widely expounded,
have not led to any advancement in the non-expert’s ability to spot a liar;
research suggests that normal people are no more than 50% accurate at
recognising deception (the same odds as tossing a coin).\(^7\) In a well-known
experiment, 65 English police officers were asked to view a recording of
a serial killer from Holland, being interviewed in Dutch and to judge the
verity of six of his statements (which they could not understand seeing that
he was not speaking English) based on his body language alone. Their suc-
cess rate was higher than the study cited above, but was still only 64% over-
all (70% accuracy for truths, but only 57% for detecting lies). Of particular
interest to our discussion here, it was also found that those of the police
officer subjects who held popular stereotypical views about deceptive be-
haviour, such as “liars look away” and “liars fidget”, performed less well
in the test.\(^8\)

As in almost every other area, increasingly, sophisticated technology
and artificial intelligence may also be employed, among which are develop-
ment of so-called “lie detectors” or polygraphs, and video analysis of micro-
expressions (facial expressions that happen so quickly that they are almost
imperceptible to the naked eye). None of these methods is foolproof primar-
ily because people do not all display the same pattern of behaviour when
lying, and also because the marked behaviour that one may observe, even
on a polygraph, is not deception per se but rather the high levels of stress
that are associated with lying under interrogation: for example, blood pres-
sure, respiration, pulse rate and galvanic skin response (e.g. sweat activity
in hands).

Although high stress levels may commonly be attributed to the act of
trying to deceive, they could also be caused by other factors (e.g. the fear
of being accused, even wrongfully; the trauma of memories one is forced
to revisit). Deceivers may find ways to camouflage their state of anxiety,
and conversely innocent people may feel and show abnormally high levels
of stress when put under scrutiny. Such a thing was demonstrated in a 2019
role-play experiment. A group of students were taken on a short ferry trip and given laptops, some of which were said to contain sensitive material, and were instructed “to blend in” and not “to look suspicious”. In a second similar experiment, to raise the level of tension, some of the subjects were given foreign currency to smuggle. To make things even more stressful, two officious confederates were sent without warning onto the ferry where they appeared to check faces against photos.

Videotapes were secretly made and shown to observers who were asked to identify the smugglers from their reactions alone. Detection rates were only 48% for the first experiment, and 39.2% for the second: in each case no better than chance, in the latter, considerably less. The authors (Mann et al. 2019) concluded that in the second experiment, because of the shock of the unexpected photo check, the innocent subjects displayed levels of anxiety which were high enough to be indistinguishable from those of the “smugglers”, who, conversely, better prepared for some scrutiny, took effective measures to reduce the amount of anxiety that they displayed. This shows that, while a guilty subject may typically experience high levels of real internal stress, there exist effective ways that he or she may control its external signs.

In a polygraph test, he or she may maintain a relaxed state throughout. If this proves impossible, another way to try to beat the polygraph is to deliberately make oneself anxious while answering innocuous questions (e.g. by deliberately thinking of something traumatic). When one’s stress levels while answering these so-called control questions is compared to the relevant questions (those relating to the matter for which one is being questioned), a falsely high stress score in the former will make it harder to identify a genuinely high score in the later. Furthermore, people with certain conditions, such as psychopaths and sociopaths, which may also give them a greater propensity to commit crime, may feel little empathy with other people and unable, in any case, to feel the usual levels of guilt or remorse when recalling their actions. They can thus be dispassionate deceivers, which makes methods of deception analysis that rely on comparing levels of stress of limited use.

There is much disagreement among experts about the usefulness of polygraphs and most agree that even when reliable data is collected, much still depends on the analyst’s skill in interpreting it. This explains why polygraphs are inadmissible as evidence in many jurisdictions, even if they are a popular gimmick on TV chat shows. As we shall see, similar concerns are applicable to many more purportedly scientific methods of DD, especially things like Statement Validity Assessment (§ 6).
3. Language as Revealer

One relatively unproblematic area of linguistic DD are those cases where an unintentional aspect of linguistic behaviour, most commonly the use of a particular word, momentarily reveals part of the reality that the speaker is elsewhere concealing (see § 4). Such a thing tends to happen either because the subject simply forgets to lie (and maintaining a deception over a long period of time and through numerous interactions requires a great deal of mental effort) or because of interference from the subconscious.

An example of a momentary lapse in concentration is provided by David Westerfield, a paedophile convicted in 1991 for the abduction and murder of seven-year-old Danielle Van Dam. In his alibi, he claimed to have been away by himself in his RV. In one of his interrogations, he used the first person plural pronoun we as a subject in relation to this trip. This inconsistency alerted investigators, and was taken as an indication of the fact that he was not alone and that it was he who had kidnapped and murdered Danielle – something for which physical evidence was later found.

Another fairly common example is use of the past tense to talk about people who the speaker should not know are dead. Such is the case with Maxine Carr, who was convicted in 2003 for conspiring with her sex offender boyfriend, Ian Huntley (at whose hands she herself suffered physical abuse) to pervert the course of justice. She provided Huntley with a false alibi for the night that he murdered two ten-year-old girls, Holly Marie Wells and Jessica Aimee Chapman (both pupils in the class that she was teaching assistant for). In 2002, two weeks into a massive hunt for the two girls (then classed merely as missing), Carr gave a live interview to Sky News from the high street of the town, Soham (Cambridgeshire, England). During this, she spoke about the girls, famously stating:

1) Nobody believes that they would ever run away. They were very close to all their family. This [a card] is something I’ll probably keep for the rest of my life, I think. It’s what Holly gave me on the last day of term. She gave me this with a poem on the inside saying “to a special teaching assistant” really, and we’ll miss her a lot and we’ll see her in the future. And that’s the kind of girl she was. She was just lovely, really lovely.  

Despite the affirmation that “we’ll see her in the future”, what stuck out in the mind of the reporter, Jeremy Thompson, and many viewers as this interview was broadcast, was Carr’s use of the past tense when referring to the girls: “They were very close to all their family”; “And that’s the kind of girl she was. She was just lovely, really lovely.” This may indicate that Carr
Thomas Wulstan Christiansen

had resigned herself to the fact that she would never see either of the girls again. However, despite the popular version of events, this does not in itself prove that she was fully aware that they were both dead (something which at that point would have constituted so-called guilty knowledge), merely that she may have, quite reasonably assumed that, after two weeks of a fruitless nationwide search, the girls were likely never going to be found alive. Indeed, the reporter is himself is guilty of the same assumption having framed his question to Carr thus: “you knew the girls, what were they like?” Carr’s defence team argued that it was his use of the past tense that Carr echoed inadvertently in her reply.

That said, while for the hardened news reporter to harbour such views about the unlikelihood of the girls’ disappearance ending happily is perhaps understandable, for the young teaching assistant, the two girl’s favourite member of staff (and who, so Carr was to claim, had offered to be her bridesmaids), a similar level of objective analysis would seem to betray a callousness that would come not only from an objective estimation of their chances of survival, but either from some knowledge of what had happened or because the girls did not mean as much to her as she claimed or as, apparently, she did to them. In similar circumstances, friends and relatives of victims do not so easily fall into the past tense where there is still a chance of their survival, even when interviewers may, rather tactlessly, do so. For example, in more than a dozen years, the McCanns (see §5) have never given any linguistic clues, on record at least, that they have resigned themselves to the increasingly more probable likelihood that their missing daughter, Madeleine, will never be found alive.

The deception here perhaps regards not Carr’s knowing that the girls had been murdered by her boyfriend, as it is often claimed but denied by Carr (who has always maintained that she did not realise until later), but in the fact that she was not as worried about the fate of the girls as she was claiming. There is therefore a mismatch between the concern that she put into her words and demeanour, and the detachment with which she encoded into her grammar and syntax the fact that she already considers them as belonging to the past (i.e. no longer living). This constitutes a clear indication of some deception which may lie not so much in what she is saying, but rather in the degree of concern that she is feigning.

In fact, such examples as those of Westerfield and Carr do not represent indicators of deception in themselves: the opposite in fact. They are rather a glimpse of the truth and, by their incongruity with the rest of the narrative (the contention that Westerfield had been by himself or that Carr
felt a special bond with the missing girls), indicate that the other parts constitute a deception. This is why we here label them revealers.

In the second case, repressed internal emotions or feelings may escape and manifest themselves linguistically. Such cases, which may include what are popularly known as “Freudian slips” (or more technically, parapraxis) are not to be confused with slips of the tongue (which are merely errors in the choice of word or form, or linguistic inaccuracies caused by faulty performance and not by the speaker’s actual competence). In the popular imagination, Freudian slips often involve revealing embarrassing things about what the speaker is thinking, particularly of a sexual nature:

2) She: “What would you like-bread and butter, or cake?”
   He: “Bed and butter.”

In the context of deception, parapraxis can cover those cases where the speaker’s inner feelings, precisely those that they are trying to camouflage, leak out and manifest themselves linguistically. Such a thing can be very obvious in the use of proximal or distal demonstratives. Like the pronoun we discussed above, these are function words and are thus prone to be used spontaneously without much thought. Therefore, they are difficult for a speaker to manipulate. Demonstratives are primarily used for physical distance but, at a more metaphorical level, may be used for psychological distance (see for example Lyons 1999, Christiansen 2011). There is a natural tendency to keep things one dislikes or fears at a distance because approaching them causes great discomfort (like a snake on a forest path). This basic instinct is carried over into language. Proximals like this may be used to indicate affinity or liking towards something, while distals like that express distaste towards or a desire to avoid or dissociate oneself from something.

In 1998, when President Clinton was accused of having an extramarital affair with a 24-year-old intern, Monica Lewinsky, he famously said in a televised address, “I did not have sexual relations with that woman, Miss Lewinsky.” Whether or not, one believes him, a desire to distance himself from Lewinsky is undeniable. Furthermore, in this example, Clinton does not use contractions (e.g. “I didn’t have sexual relations with that woman”). It could be argued that the use of the full form is a sign of overemphasis (the deceiver in their desire to be believed, puts more stress on the usually contracted item than a truthful person would). Another common explanation is that the failure to contract is at a subconscious level.
a form of distancing device in that it increases the physical space (albeit by micro-seconds) between the subject and the action that he or she wishes to separate him- or herself from. The failure to contract could also constitute a symptom of inner discomfort and conflict. Contractions, though shorter and a feature of natural fluent speech, constitute an extra level of language processing on the part of the speaker.\(^{21}\) They are perhaps thus more difficult to produce in a highly stressed state where, revealingly, general flow may also suffer: see for example how many speech disorders such as dysphemia (stammering) are aggravated when the subject is under great stress (see § 2).

The avoidance of possessive determiners or pronouns (e.g. *my, mine*) can also be significant. In a recent case from Colorado (USA), now the subject of a Netflix documentary,\(^{22}\) Chris Watts murdered his pregnant wife, Shan’ann Cathryn Watts (née Rzucek); and two small daughters, four-year-old Bella and three-year-old Celeste. The day after their disappearance, Watts gave an interview to a local TV channel. During this, he tended to use pronouns (*she, them*) referring to his wife and children rather than their names. This is itself worthy of note because pronouns, being function words, have less evocative power than names: individual labels for specific people (see Christiansen 2009).\(^{23}\) Most markedly to many observers, Watts at one point repeatedly referred to his daughters, Bella and Celeste, as *the kids*:\(^{24}\)

3) I mean right now I don’t even want to just like throw anything out there, like I hope that she’s somewhere safe right now and with the kids, but I mean could she have van...could she have just taken off, I don’t know, but if someone has her and they’re not safe I’ll want them back now. Like, that’s, that, that’s what’s in my head is like, if they’re safe right now, they’re gonna come back, but if they’re not safe right now that’s the not knowing part, like if they’re not safe. Last night I was, I had every light in the house on, I was hoping that I would just get just ran over by the kids running in the door and just like barrel rushing me, but it didn’t happen and it was just a traumatic night trying to be here.\(^{25}\)

The significance of the use of expression *the kids* becomes apparent when one considers the less marked alternatives: *Bella and Celeste* (or *Celeste and Bella*), *my kids*, *my daughters*, *my girls* etc. The choice of a more neutral definite article that implies no relationship rather than a possessive, which does, is particularly interesting. Possession is a complex cognitive concept but it implies a strong connection between the *possessor* and *possessum* (the possessed)\(^{26}\) absolutely in keeping with normal relations between a parent and young child. That Watts, in the whole seven minute interview, only uses the possessive determiner *my* on four occasions (i.e. *my head, my kids,*
my life, my life), all in the same minute more or less, betrays the fact that, at some level, the picture of a caring family man worried about his wife and daughters’ whereabouts that he is trying to paint is founded on deception.\(^{27}\)

Another interesting aspect of the definite pronoun the, is that, in English, as in many languages, despite being technically a demonstrative, it does not mark spatial distance as such but the abstract quality of definiteness. This relates to whether concepts are readily identifiable (Lyons 1999), that is, accessible or retrievable in the mind (Cornish 1999, Christiansen 2009) – what one could call cognitive proximity (as opposed to cognitive distance which is usually signalled by a non-definite determiner such as a). In an infamous miscarriage of justice from 1952, which was eventually overturned in 1998, 19-year-old Derek Bentley was convicted and hanged in London for being party to the murder of a policeman, Sidney Miles during a failed burglary, through the legal principle of joint enterprise. The unfortunate constable was shot by Bentley’s co-defendant, 16-year-old Chris Craig, who could not be tried as an adult and thus received a more lenient sentence: 10 years in prison.

Bentley (who at the age of 15 had been diagnosed with a mental age of 10 years 6 months, and a reading age of only 4 years 6 months) was undoubtedly an easy target for the prosecution, police, and those in power who were determined to make an example of at least him. The statement that Bentley supposedly gave is now believed to have been written for him by the police, who in effect framed him.\(^{28}\) Among other things, it contained the damning line: “I did not know he was going to use the gun.”\(^{29}\)

The prosecution in the original 1952 case and the appeal which took place a few weeks later, early in January 1953,\(^{30}\) argued that the determiner the proved that the gun Craig used was something Bentley knew about (i.e. it was accessible in his mind: he was aware of its existence). If this had not been so, they maintained, Bentley would have said “I did not know that he had a gun”. The implications of this argument were that Bentley was Craig’s accomplice not only in the burglary but also in the murder. In the 1997 retrial, the statement discredited, it was found that Bentley, though an accomplice to Craig in an attempted burglary, was not necessarily aware that his reckless friend was armed. That such importance was put on one word (the most common word in the English language as it happens) was protested at the time of the first trial. The defence did not dispute the police’s version but argued that Bentley certainly knew about the gun after the shooting and at the time that he made his statement, so saying “use the gun” was not out of place: i.e. “I did not know that he was going to use the gun (which I now know he had)” rather than “I did not know he was
going to use the gun (which I knew *then* that he had)”. In the original trial, which lasted only three days, such niceties were brushed over, and the jury took just 75 minutes to find both defendants guilty. One has the feeling that whatever Bentley had said would have been twisted and used against him; if ever there was a case illustrating the dangers of not using one’s ancient right to remain silent, it was *Regina vs. Craig and Bentley* (1952).

Parapraxis may also manifest itself in the use of modal verbs and modal adverbs: items which encode the attitude of the speaker towards that which they are saying, in particular the epistemic force (e.g. degree of belief) that they attach to the various propositions encoded in their utterances. Such a case is reported about Ian Huntley (see above), who, two days after the murder of Holly Marie Wells and Jessica Aimee Chapman, drove to Grimsby to pick up Maxine Carr, his girlfriend. On the way back, the couple picked up a hitchhiker, who, hearing that they lived in Soham, brought up the subject of the two girls’ recent disappearance. This witness testified for the prosecution at Huntley’s trial that among the many things in the couple’s general behaviour that struck him was the fact that he remembered Huntley saying words to the effect that “until last night when a woman, appeared on TV who had supposedly seen them, he was the last person to see them alive”.

The adverb *supposedly* tends to be used when the speaker has a very low degree of belief in what he or she is describing. This led the prosecution to question in court how Huntley could harbour such strong doubts about whether the two girls had been seen alive the night before, and to argue that it was clear evidence that he had guilty knowledge.

Other more subtle revealers are the use of the present instead of the past tense to narrate past events. The theory here is that past events are recalled from memory (whether these memories are accurate or not is of course a whole different area to that which we are discussing in this article) whereas falsehoods are retrieved from the imagination: another part of the brain. While a real past event may naturally be recounted using a past tense; something invented may be described in the present because the narrator visualises it in his or her mind’s eye, so to speak. An example is given by the well-known statement analyst Mark McClish (an ex-US Marshall and Secret Service agent who trademarked the phrase *Statement Analysis* and now lectures and runs courses for law enforcement agencies and other clients). On his website, he analyses the statement of the journalist E. Jean Carroll who, in her 2019 book *What Do We Need Men For? A Modest Proposal*, accused Donald Trump of sexually assaulting her at some time in the 1990s. McClish dismisses the specific allegations that she makes partly because they are in the present tense:
4) I try to push him off with my one free hand – for some reason, I keep holding my purse with the other – and I finally get a knee up high enough to push him out and off and I turn, open the door, and run out of the dressing room.

McClish contrasts this with other episodes of sexual assault going back to her childhood that Carroll describes in her book. As he notes, these are all in the past tense, making the Trump accusation stand out. He concludes:

It is possible Carroll did meet Donald Trump in a Bergdorf Goodman’s store. Trump might have flirted with her and even hit on her. However, because she described the incident in the present tense which violates the rules of grammar, we have to question if her story is 100 percent true.

McClish is rather traditional (i.e. prescriptive) in his attitude to grammar. “[...] violates the rules of grammar” is not entirely accurate (it is not ungrammatical to speak about the past using the present tense: merely relatively unconventional), and, in any case, not a way that modern descriptive linguists would use to express themselves. Rather, we can say that the present tense used in such a context may be seen as marked. Indeed, stylistically, as McClish mentions on the same webpage, the present tense is sometimes used in what he describes as fictional novels. It can also be used journalistically. In both cases, such a usage serves to make the narration of an event more immediate and exciting, very much as a commentary on a sports event does. People do in fact often use this kind of narrative present in spoken discourse, especially when they are telling jokes or humorous anecdotes.

The Trump episode was obviously one of the choicest sections of Carroll’s book. Both she and her publishers must have known it would inevitably attract a lot of media attention, and be reproduced as an extract many times. One can assume then that more than one collaborator carefully edited this passage in view of the publicity that it would generate, and perhaps of the litigation that it might provoke. That this precise section was probably not completely the work of Carroll alone would explain the stylistic differences with the rest of the book. That said, Trump denies the accusation, and Carroll has not yet pressed charges, so the matter has never been investigated by the police or brought to court. McClish’s analysis of Carroll’s account is therefore not corroborated by other evidence. Nonetheless, the rationale behind his conclusions is nonetheless worthy of consideration in the context of our discussion here even though the example that he uses is questionable.
A different example that we could look at is from an interview given by the convicted murderer Stuart Hazell with the criminologist Mark Williams-Thomas for ITV News in 2012 about the supposed disappearance of his girlfriend’s 12-year-old granddaughter, Tia Sharp, from the house that they shared in New Addington, London, while she had been left alone with him. In this, we can see one example of the use of present tense (in Italics) of the kind that McClish identifies as an indicator of deception.

5) well basically er I was in the kitchen then finished off all that then I come back in here finished off my hoovering in the front room and the hallway got to there when I got the dog’s bed I had to shake the dog’s beds out erm as I was hoovering then she walks out she walked past me from the front room to go out and she walked out the front door that’s all I know.

The present tense in “she walks out” (later reiterated as “she walked past me”) is interesting because the banal action described is critical to the case. In the rest of his comments, Hazell is consistent in his use of past tenses (with many non-standard forms). Indeed, throughout the long interview (over 11 minutes) he shows considerable control over his tenses and, for example, never makes the mistake that Maxine Carr does in Example 1 of forgetting to refer to his victim in the present tense thereby signalling that he still believes that she is alive. The significance of this single marked use of the present tense to refer to a past event, “she walks out”, lies in the fact that Tia never did walk out of that house, and Hazell’s appeals for her to come home were a sham. Her body was later found in the loft. Hazell initially claimed he had killed her by accident, but on the fifth day of his trial for murder changed his plea to guilty. He received a 38-year custodial sentence.

4. Language as Concealer

Another way that linguistic analysis can help in the detection of deception is by looking not just at what people say but at what they avoid saying. The premise here is that a normal person finds telling a lie more difficult than telling the truth and will, in most cases, avoid blatantly lying whenever possible. This means that cases of direct lies are relatively rare, and it is often surprisingly difficult for guilty parties to offer a simple denial, even when confronted.

For example, in 2002, Scott Petersen, who was having an extramarital affair, murdered his wife Laci and unborn son in Modesto, California. During
a TV interview, he was confronted with suspicions about his involvement in her disappearance, and gave the following reply:

6) Interviewer: So, you had nothing to do with this? I mean, people are having questions now.
   Peterson: The focus is on her. Let’s keep her picture out there. Let’s keep the tip line, the description out there.\(^39\)

Peterson ignores the accusation entirely, thereby avoiding having to issue a denial. He does not even seem annoyed by the presumption of the question. In another example, the subject is less sanguine and reacts with something more approaching anger. In 1992, in Cirencester (Gloucestershire) a 35-year-old businessman, Nicholas Kay, killed his wife Rhonda, after she found him in bed with their lodger, whom he later married. Kay disposed of Rhonda’s body in a local lake claiming she had left him. It took many years to convict him (of manslaughter) despite numerous people, including Rhonda’s family, being convinced that he had killed her. This was because Rhonda’s remains were never found (and Kay was arrested only after the police had bugged his house and had Rhonda’s sister phone him telling him falsely that Rhonda’s body had been discovered, which later provoked an argument between him and his new wife, the ex-lodger, directly referencing Rhonda’s killing and the disposal of her body).

At a press conference shortly after the murder, Kay made an emotional plea for his wife to contact him or at least to let him and their two children know that she was safe. In an unusual break with normal protocol at such an event (and with the consent of the police who were already suspicious of Kay), a journalist challenged him directly, producing the following short exchange:

7) Journalist: Mr Kay, have you killed your wife?
   Kay: [long pause] What do you think?
   Journalist: Just answer the question.
   Kay: [no pause] No I have not killed [unint].\(^40\)

Apart from the failure to use a contraction (e.g. “I haven’t killed”) which, as we say in § 3, is commonly associated with overemphasis and deception, what is noticeable in this exchange is that Kay, obviously caught by surprise and stunned into silence almost, does not answer the question directly. Instead, he counters with a question of his own that is defiant and almost sarcastic in tone (“What do you think?”). This is not technically a denial but rather a deflection of the question. Unlike Example 6, the journalist...
Thomas Wulstan Christiansen
does not let him off the hook so easily, and presses him to answer, at which
he immediately produces a direct negative reply. This is a barefaced lie, but
Kay delivers it in such a fashion that he seems to reproduce the journalist’s
question as if he were merely echoing what he has just heard in a dispassionate
manner (as well he may, because repeating words would be less stressful
than thinking about what they mean). Furthermore, his voice trails off at
the end as if he were literally concealing the words (significantly, very possi-
bly killed my wife): “Have you killed your wife?” – “No I have not killed [my
wife].” Most people would answer a straightforward yes / no question with
a simple “yes” or “no” and not repeat the whole question in this unnatu-
ral stilted manner. An innocent person would normally suffer no feelings of
guilt, remorse or shame, and so they would not shirk from issuing a denial;
indeed, they would be eager to do so.

Furthermore, a common response on the part of an innocent party to
such direct challenges in Examples 6 and 7 is incomprehension and angry
indignation. Here, complex cultural aspects may come into play as a false
accusation can be seen as a direct attack on what in psychology is termed
the subject’s face (i.e. their self-esteem: the image that they seek to project
to the world).41 In the first example, Petersen passively ignores the attack
on his face. Kay, by contrast, though not innocent, wants to protect his,
and becomes aggressively defensive. However, his response is relatively con-
strained because he probably realises that it would not be in his interests to
publically show his aggressive side. Innocent persons in the above two con-
texts would not typically expect to be thought of as guilty. They thus tend
to be less prepared to deal with the direct threat to their face. As a con-
sequence, their reaction may be much more instinctive and less controlled
than in either Example 6 or 7.42

Pronouns may also be significant by their absence, as in cases where
guilty parties either use the passive voice to describe actions or omit first
person pronouns, in both cases concealing their own agency. In either in-
stance, the lack of self-reference is a manifestation of their desire, conscious
or subconscious, to relieve themselves of the responsibility for their actions.
A classic example of the former is the line “serious mistakes were made”
uttered in 1987 by President Reagan in his State of the Union Address speak-
ing about the Iran-Contra scandal and his administration’s lying about it.
First person pronouns may be omitted completely. The following unsourced
(so possibly invented) example is given by Clikeman (2012: 31):

8) I picked up the gun to clean it. Moved it to the left hand to get the cleaning
rod. Something bumped the trigger. The gun went off, hitting my wife.
The absence of the first person pronoun indicates the desire of the husband to distance himself from his actions. He owns up to cleaning the gun, but the shooting is presented as something that he was not directly involved in, and thus not responsible for. This shows a lack of remorse and thus perhaps malice aforethought. An example is found from the same interview given by Chris Watts as Example 3 where he omits the first person pronoun before *walked*, and more tellingly, any reference to his wife and two daughters which should be the subject of *vanished*: 43

9) And Nicole called me when she was at the door and that’s when I came home and then walked in the house and nothing, just vanished, nothing was here.

Similarly, the speaker may or substituted by the more generic, impersonal, you or one (Clikeman 2012: 31) – again an unsourced perhaps invented example:

10) Question: Can you tell me about reconciling the bank statement?  
    Answer: You know, you try to identify all the outstanding checks and deposits in transit, but sometimes when you’re really busy you just post the differences to the suspense account.

As can be seen, by failing to directly associate him- or herself with the action through use of the first person pronoun, the speaker avoids answering the question: he or she does not actually say what he or she did (or did not) do, just what people in general tend to do. The general pronoun *you* here functions as what in pragmatics is termed a *hedge*, which as the name suggests, is a way of protecting oneself by avoiding being too specific or categorical: both things that one could later regret if it turns out that what one said is inaccurate. It is also a feature of, among other things, academic discourse where everything is open to question and up for further discussion (see for example our criticism of McClish’s choice of words in ‘[...] violates grammatical rules’ – § 3 – a phrasing which would have benefited from some hedging).

As seen in Example 10, hedges diminish or obscure meaning in some way. According to Lakoff, a pioneer in this area, hedges include a range of expressions such as *sort of, very, really, a true, a regular, a typical, technically, loosely speaking, strictly speaking.* Lakoff (1972: 195) states that in natural discourse (as opposed to logic), truth and falsity are not absolutes, but a matter of degree. Hedges then function as “words whose job is to make things fuzzier or less fuzzy.” In the field of DD, it is the former kind of hedges that are the more interesting: those that serve to dilute the truth.
One of the effects of hedging is that the addition of the extra words to make things fuzzier has the side effect of making the sentences containing them longer. McClish in his various analyses frequently follows the principle that shorter sentences are more credible than longer ones.\textsuperscript{44} Similarly, Clikeman’s (2012: 34) uses \textit{Mean Length of Utterance} [MLU] as one of his ten indicators of deception, noting however that:

\begin{quote}
When people feel anxious about an issue, they tend to speak in sentences that are either significantly longer or significantly shorter than the norm. Investigators should pay particular attention to sentences whose length differs significantly from the subject’s MLU.
\end{quote}

If markedly longer utterances can in most cases make one suspect hedging, shorter ones may by contrast be the result of the natural tendency of a deceptive speaker, sensing him- or herself in difficulty, deciding to say the least possible in order to lower the risk of incriminating of him- or herself, as does a naughty schoolchild mumbling monosyllables.

The benefits of hedging to someone trying to be deceptive are obvious: to use an invented example, “I left at 8 o’clock” is easier to disprove than “I suppose I may have left some time around eightish but I’m not sure.” Hedges can thus be an indicator of deception. The example below is from the same interview with Stuart Hazell as Example 5. In the extract below, where Stuart Hazell (SH) and Tia’s uncle, David Sharp (DH) are speaking, we highlight all the cases of hedging with Italics.

11) SH: I was getting a \textit{bit} concerned well Tia was meant to be home at six we was getting a \textit{bit} concerned \textit{about} seven do you know what I mean we was looking out the door [unint] at the front er think it was \textit{about} quarter past seven half seven or \textit{something like that} where I’d \textit{mentioned} to Chris earlier on \textit{in the day} because Chris come home at half past two erm er \textit{just} about the fair so what we’d done we got in in the car and went down to the funfair where Tia I thought she \textit{might} have snuck out \textit{or something} snuck off to the funfair saying she was going \textit{wherever} or \textit{whatever} er we went down to the funfair erm \textit{was it} Orpington \textit{wasn’t it}

DS: \textit{er no} [it’s]

SH: \textit{[was] it} erm

DS: Ashburton

SH: Ashburton

DS: Ashburton Park\textsuperscript{45}

Hazell here appears to give a lot of information. However, on closer inspection, it can be seen that most of the details are not presented as absolute
facts but are rendered fuzzy by the hedges, allowing him, if needs be, to re-
tract what he says later without too much loss of credibility. The verb men-
tion is an interesting example of a hedge because it has less force than say,
which usually implies deliberately telling someone something. If something
is only mentioned, by contrast, it is information that is given in passing in
a casual manner. If the Chris in question had contradicted him, Hazell could
have said that the latter must simply have not being paying proper atten-
tion. In particular, Hazell introduces the vague possibly that Tia might have
gone to a nearby fair; perhaps he is being deliberately unclear about the ex-
act location (Orpington/Ashburton Park: two entirely different areas, over
six miles apart). If the police decide to follow this line of enquiry (a mam-
moth task when one thinks of all the interviews, searches, and enquiries
that it would involve) but uncover nothing, he has little chance of being
charged with wasting police time. In the meantime, he will have taken some
of the pressure off himself. There is also the added prospect that the police
may actually turn something suspicious up which they might connect, albeit
wrongly, with Tia’s disappearance.

Interestingly, Hazell, 37 at the time of his arrest, had previous convic-
tions (including assault) dating from the age of only 14.46 He was no stranger
to interrogation and must have been a relatively accomplished liar,47 espe-
cially compared to people like Westerfield, Watts, or Carr. In this light, it is
noteworthy that, in his description of Tia’s supposed leaving of the house,
he is, by contrast, very specific, and there is a complete absence of hedges:

12) She said good-bye. I said make sure you’re back at 6 [unint] Yeah Yeah Yeah.
And that was it and then the door closed and she walks out [...] I don’t take
precise times and things like that. But when she walked out that door, I know
damn well it was 10 past 12 according to my clock because as I was hoovering
up the dog mess by m-my kitchen I look up and I’ve got a great big clock in
front of me on a cooker, which says 12:10.48

The reason for this is that Hazell, though no criminal mastermind, has
enough of a habitual offender’s (and ex-convict’s) knowledge of the ins and
outs of crime investigation to divert attention away from himself and to
try to leave clues pointing to some alternative scenarios (see his hint about
the funfair in Example 11). He was aware that a neighbour (later charged
and convicted for wasting police time by making a false report), probably
in the pathetic desire for 15 minutes of fame, reported seeing Tia in the vicin-
ity of her house, confirming the version Hazell had given to the police.49
This, Hazell must have seen as a stroke of luck. It emboldened him to give
more definite information about her leaving the house and thus appear more
credible. If anything, he overcompensates by being more precise than the average person would in such circumstances. He thus goes too far and attracts perhaps as much suspicion as if he had been excessively vague and used numerous hedges. His account raises the question of why he would remember so clearly the precise time that Tia had gone out; if he had been innocent, he could not have known that such a small detail would later be significant. Most people have clocks in their kitchens constantly making them aware of the time; this does not mean that they are able to remember with such precision at what time the unexceptional comings and goings of the average household occur. Hazell seems to actually acknowledge this with the phrase “[...] I don’t take precise times and things like that”, which appears to show that he realises that he cannot credibly present himself as a habitually precise person.

That Hazell was able to attempt to play the system is confirmed shortly afterwards where he again displays his cunning and knowledge of what kinds of things stand out to investigators because he lays stress on the fact that he was not the last person to see Tia:

13) I know deep down in my heart that Tia walked out of my house she walked out of there and I know damn well because she was seen walking down the path I know she made that track down to that way what happened after that is I don’t know I just I and I wasn’t the last person to see her because the last person to see her was the one walking down the pathway

The reason for this of course is that it is a commonplace that the last person to see the victim of a crime should be treated as a prime suspect. From early on in the search for Tia, Hazell, once his criminal record was examined, fell under the scrutiny of the investigators. Naturally, he became also the subject of speculation in the press, who set up camp outside the family’s house, where he also lived, and so he was virtually confined to the house. By trying to pass on the mantel of the last person to have seen the disappeared person to the neighbour who had reported seeing Tia to the police, he is also attempting to divert suspicion away from himself.

Another common way that those wishing to deceive may conceal things linguistically lies in the amount of the discourse that they allocate to relevant parts of their narration of events: something which has been termed narrative balance (see Clikeman 2012). A truthful person, it is thought, will give appropriate detail to the different parts of the description in proportion to their relevance. For example, talking about a car accident, he or she will describe the immediate events around the collision or whatever in detail. According to Clikeman (2012: 33), speaking about insurance claims,
Looking again at Hazell’s interview, we can identify the critical event to be Tia’s leaving the house at 12.10. This, of course, is the part of his story that he most wants people to accept at face value, and not even think about questioning. In the long extract below (itself cut down from a much longer passage), we can see how this information is embedded in a much denser description of events happening before (the prologue) and after (the aftermath). The non-critical events are characterised by a plethora of detail about largely irrelevant matters (e.g. the housework he was doing, what Tia had for breakfast, their various movements around the house, his frustration with Tia for not knowing how to charge her phone properly), all invented as it happens (but perhaps based on real events that had occurred on other days), since it is believed that he had killed Tia earlier the previous night:

14) she come downstairs she sat down er sat down here right there in the chair where Dave where you are now Dave er I’m sitting there watching telly she picked up er your mum’s DS up played the DS for a little while I said we’re gonna have some breakfast so I made her some toast and she had the toast and then she wanted a sausage roll because she’s always eating sausage rolls er er basically then she was sitting there she doesn’t take her washing up out so I took her washing up out erm just started doing like a bit of washing up in the kitchen she was in there she was telling me what she was doing but I weren’t really logging it into my head I didn’t do you know what I mean then I was I was washing up wiped the sides down er just had the hoovering I was doing the hoovering there but what it was started off sweeping up in there but we have a rug I can’t sweep the rug so I had to hoover the rug because it’s got it’s like really fluffy so I’ve hoovered the rug I’ve hoovered all the way out to the front door literally the kitchen the hallway I’ve got out there then I’ve come back and had a cigarette er this time Tia er I’ve gone upstairs I’ve got the washing sorry I’ve done the hallway there I’ve gone upstairs done the washing made sure there’s no washing upstairs made the bed opened the curtains er come back downstairs er by then Tia’s going upstairs to get changed er she was still mumbling away er I can’t remember what she was bloody on about to be honest with you er excuse my language erm well basically er I was in the kitchen then finished off all that then I come back in here finished off my hoovering in the front room and the hallway got to there when I got the dog’s bed I had to shake the dog’s beds out erm as I was hoovering then she walks out she walked past me from the front room to go out and she walked out the front door that’s all I know and she left her bloody phone on charge because I told her to sit there and leave her phone on charge I didn’t mean leave it on charge because what Tia doing she plays the BB thing but then she uses it as it’s charging so there’s no charge going through to it so when
Thomas Wulstan Christiansen

I said to her just leave your phone on charge it means leave the phone on charge not use it let it charge up a bit so you can actually take it with you or whatever because she’s been responsible to go to Croydon before she’s been responsible to go on trains and buses and trams and everything before on her own not so much trains but her trams and buses she’s done it all on her own and it was just an everyday thing you know just that one time you want to bloody listen to her and you just don’t

It can be seen that Hazell passes over the actual leaving of the house (in bold Italics) relatively quickly, hardly providing any details, and treating it as a given: something that requires no further explanation. He may well have felt some genuine remorse (two days into his trial he changed his plea to guilty so as, he said, to spare the family further suffering). Accomplished liar or not, it may have pained him at a subconscious level to remember that Tia had not in fact left the house, and that she would never be coming back.

The wealth of other details serve various purposes. First, they distract attention away from the critical event, like a magician waving one hand theatrically while he or she quickly hides something with the other. Second, they make Hazell appear like a cooperative witness freely volunteering information (none of which, crucially, of any use for solving the mystery of Tia’s disappearance). Third, the picture he paints of himself as a loving carer and diligent housekeeper represents him as a good person, someone unlikely to harm a twelve-year-old girl. Finally, for our purposes here, we also see more evidence of Hazell’s cunningness: among the many irrelevant details cited above is more than one mention of her leaving without her phone. This seems to be information that he is planting via the interview, no doubt because he realises that the easiest way for police to have traced her would have been via her mobile phone. He knows that he needs to provide investigators with some credible reason to explain why she is now “off grid”, so to speak.

5. Basic principles of Deception Detection: marked versus unmarked behaviour

As can be seen in Sections 3 and 4, it is possible draw up a list of diverse linguistic features that experience and research has shown may be associated with deception. It is also clear that, in individual cases, these features are only indicators, not markers as such, because they can typically also be explained by other factors, not only the desire to deceive.
What connects the various examples that we have discussed is that, seen from the perspective of behavioural analysis, they all represent ways in which the subject is displaying abnormal behaviour. This is a theme common with other areas of investigation. The various techniques of lie detection that involve the observing of the subject’s behaviour (be it their verbal language, their body “language”, or changes in their blood pressure, pulse rate, etc.) rest on the idea that it should be possible to compare such indicators against those of the observed party when he or she is not under stress, and is presumed to be being truthful. In this light, a specific form of behaviour is not taken in itself as a sign of deception, but regarded as such only if it can be classed as marked, that is, noticeably different (or more frequent in the case of a specific feature) than that which is found when the subject is relaxed and being truthful. For example, scratching or touching the nose\(^{55}\) can only be regarded as significant when the subject is talking about a certain subject if, at other points on the same occasion, they do not also show this behaviour. Even then, this action is not necessarily a sign of deception. The subject’s nose at that point may genuinely be itchy or perhaps the subject is under stress for some other reason not related to deception.

As with polygraph tests (see § 2), police interviews typically begin with a stage where the interviewee is put at ease (e.g. engaged in small talk) and asked questions about things where it can be assumed that he or she will not be deceptive.\(^{56}\) This allows investigators to establish what is sometimes called the “baseline”: an example of the subject’s unmarked pattern of behaviour against which deviations from this norm may be flagged as possible indicators of deception.

Where one is trying to detect deception outside of a formal investigative interview conducted by trained experts, for example from TV appearances as in the case of Watts, Carr, Hazell, Peterson, or Kay, there is often no baseline against which to make comparisons. This makes DD considerably harder. An observer is then often tempted to make comparisons not with the subject’s “normal” behaviour, but with that of the general population at large. The dangers of such a practice are shown in high profile cases such as the murder of Meredith Kercher, a British Erasmus student in Perugia (Italy) in 2007. Her flatmate Amanda Knox and the latter’s boyfriend Raffaele Sollecito were convicted and imprisoned for the crime (together with one Rudy Guede, who had a record of break-ins, whom they knew vaguely). However, there were many holes in the prosecution’s case and the unsubstantiated theories that they put forward regarding the motive, e.g. a sex game gone wrong, or a ritualistic satanic murder.\(^{57}\) Furthermore,
the police conducted a very sloppy crime scene investigation (some of which was caught on film). In 2015, after, a national and international outcry, a failed appeal, and a retrial, Knox and Sollecito were eventually acquitted (Guede had been tried separately and his conviction stood).\textsuperscript{58} From Seattle in the USA, Knox had initially raised suspicions because of her complex and confused reaction to the murder, which seemed to the local police, and even to her flatmates and to fellow international students, to show an absence of grief, signs of mental unbalance, and of callousness. For example, in the police station, she did cartwheels and indulged in some flirtatious play with Sollecito. More damningly, one of Meredith’s friends reported that when she had said “I hope she [Meredith] didn’t suffer,” Knox replied “How could she not? She got her fucking throat slit.”

Another famous case is the disappearance, also in 2007, of 3-year-old British girl Madeleine McCann while on holiday in Praia da Luz, in the Algarve region of Portugal. Many observers, some of whom with few formal qualifications or training, analysed in fine detail the interviews and TV appearances of her parents (Kate and Gerry McCann), concluding that they were lying about events. Their analyses were based partly on the fact that the parents were judged to be behaving strangely for people in their situation. They seemed too restrained and distant (in particular, Gerry) and also appeared more worried about not cooperating with any enquiries on the part of the Portuguese \textit{Polícia Judiciária} that may have led to an investigation into their actions, than about finding Madeleine or the culprit. Coupled with the fact that they had left three young children under the age of four unattended in the evening while they visited a nearby tapas bar with friends, this was taken by many as a proverbial “red flag”.\textsuperscript{59}

However, without establishing what is normal behaviour for Amanda Knox or Madeleine’s parents – in itself perhaps an impossible task when one considers the extraordinary circumstances that they found themselves in (i.e. the brutal murder of one’s flatmate; the sudden disappearance, possible abduction, and likely murder of one’s child) – there is no foundation for observations about supposedly “marked” features in their words or actions, unless one happens to have known them before the tragedy, and is able to identify what “normal” for them would be.

\section*{6. Conclusions}

In this article, we have looked at the main linguistic indicators of deception which might separately or in conjunction with other such indicators be
taken as signs that the producer of the text is trying to hide something. One of the often-cited practical advantages of some types of linguistic DD is that language can be analysed without anyone needing to actually be in contact with the speaker/writer, and that analysts can reach their conclusions on linguistic criteria alone. A statement can be taken and sent thousands of miles away and analysed by an expert, perhaps assisted by software, who does not need to know anything else about the case, and who bases his or her judgement only on the linguistic data that he or she is given. This, it is claimed, ensures a greater degree of objectivity. Using someone’s own words against them in an interrogation or a court room, also puts extra psychological pressure on them, recalling the ancient Biblical principle of: “For by your words you will be acquitted, and by your words you will be condemned” Matthew 12:37. However, as we have seen in this paper, in particular the Bentley case (§ 3), it is not always easy to be sure of what someone says, let alone what they mean.

With a view to providing more solid scientific foundations for results, in recent years, there have come about different systematic methods that, on the basis of many of the features that we have described, as well as others, construct analytical systems which are able not only to tag and ascribe values to features in transcripts (in the same way that, in corpus linguistics, items in corpora can be identified, labelled and counted), but also collect all the data and arrive at a precise estimation of the likelihood that the text comprises some indication of deception. Among the best known of these is SCAN (Scientific Content Analysis), the brainchild of a one-time polygraph examiner, Avinoam Sapir, from Israel. Such models are often marketed as training packages sold to clients (police forces or private businesses). Some now promise a digitalised way of doing a DD on suspicious texts (see McClish’s online Statement Analyzer). It is noteworthy that the inventors and proponents of such structured methods often do not come from a linguistic background, but from law enforcement. The names that they give their models/methods often look scientific but they have been developed, one suspects, largely through intuition and experience rather than through the rigorous application of any scientifically tested methodology.

At a less commercial level, there are more complicated procedures like CBCA (Criteria-Based Content Analysis), which is designed to determine the credibility of child witness statements in sexual abuse cases, as the third part of a wider SVA (Statement Validity Assessment). The focus of this is on the identification of features indicating truth, not deception in itself. Research has been carried out on SVA in the form of laboratory studies, concentrating on CBCA assessments. While, these have mainly confirmed
Thomas Wulstan Christiansen

the claims made for the technique by its proponents, there remain doubts about how representative such studies actually are of the way CBCA assessments are used in real-life criminal investigations; telling the truth in controlled conditions during a test, and telling the truth in the context of a genuine investigation into the sexual assault of a minor are obviously very different things. Despite such doubts, SVA is widely used in court cases involving the sexual assault of children in some countries such as Germany, Sweden, the Netherlands, Spain, and several US states.\textsuperscript{66} In other countries with jury systems, such as the UK, such evidence, even if it could be demonstrated to be satisfactorily reliable, might still not be admissible because the jurors are supposed to each form their own opinion in such matters.\textsuperscript{67}

This last observation raises an important issue about the use in investigations and courts of all scientific or quasi-scientific means of analysis. Recent years have seen rapid general progress in the application of technology and artificial intelligence to investigations. There is a real risk that too much faith will be put in methods and technologies by those with the power to issue arrest warrants, reach verdicts, and hand down sentences, especially as inevitably the concepts and theories behind these same methods and technologies become too specialised and complex for anyone not expert in the field in question to properly understand without the intersession of an expert. This might result, in effect, in the delegation of power or responsibility to analysts. The proponents of some of the more commercial methods of linguistic DD are often more absolutist (as opposed to relativist) than a scientist or academic would feel comfortable with being (see the McClish quote cited in § 3 about “violates the rules of grammar”). There is a danger that the degree of certainty in a black-and-white rather than a relative analysis that such practitioners display may give non-experts the impression that the underlying premises are tested and unconfutable. A constant degree of scepticism is as healthy in jurisprudence as it is in science. For justice to be served, checks and balances must be in place that do not require a high degree of expertise in one specific highly technical area. In a liberal democracy, one can hope that such a danger will be avoided; in more autocratic regimes, especially those where constant mass digital observation of citizens is becoming a real prospect, one must worry that such techniques and software may be abused and employed as an instrument of oppression and injustice. Cases like Bentley (§ 3) might thus become more rather than less likely.\textsuperscript{68}

Linguistic analysis for the detection of deception is an area that is still the subject of a lot of research and commercial interest but, to draw a comparison with polygraphs, its value is not so much as a means of proof but
rather as an investigative tool which may help investigators identify suspects who merit closer inspection. As we have seen with almost all our examples, there are few so-called “gotcha moments” as there may be with other kinds of scientific evidence, such as the discovery of the victim’s body in the loft of the suspect’s house. Rather, the linguistic evidence has to be identified, collected, and interpreted in the context of each other, and then evaluated in the context of other non-linguistic factors relating to the case. A relativist, as opposed to an absolutist, approach is called for. Consideration of what is marked and unmarked for the individual in question is paramount, as the examples of Amanda Knox and Gerry and Kate McCann discussed in § 5 show. Guilty people do not all react in the same way under interrogation or scrutiny. Furthermore, habitual criminals like Hazell, used to dealing with the police, can be convincing liars or at least know how to hedge enough to make it difficult for investigators to catch them out. The use of linguistics for the detection of deception is likely then to remain a work in progress and not an infallible tool. It is to be hoped that, with more research, and diffusion of its results, good practice and effective innovations can be shared in the never-ending struggle between those who seek the truth and those who try to hide it.

NOTES

1 The term forensic (from forensis in Latin: ‘in open court, public’ as in forum), means scientific evidence of the kind that may be presented in court. In English, the term dates from the mid-17th century.

2 Forensic linguistics can be used for a variety of purposes including DD; language analysis for the determination of origin (LADO); speaker profiling; and authorship analysis.

3 This definition from: Science Daily (www.sciencedaily.com).

4 Deception may be defined thus: “a successful or unsuccessful deliberate attempt, without forewarning, to create in another a belief which the communicator considers to be untrue” (see Vrij 2000: 6).

5 See for example the philosopher John L. Austin’s seminal work in the field of pragmatics: How To Do Things With Words (1962).

6 See, for example, Wisemann et al. (2012).

7 See, for example, Bond and DePaulo (2006), or Vrij et al. (2019).

8 Vrij and Mann (2001)

9 As in the case of the CIA officer Aldrich Ames, a KGB double agent, who passed two separate polygraphs administered by the FBI after his Russian controllers had advised him to get “a real good night’s sleep. Be fresh and rested. Be cooperative. Develop rapport with examiner. And try to remain as calm and easy as you can.” (Weiner et al. 1995: 89–90).
There is much discussion among experts about the difference between these two personality types: “Although the terms are also used in the scientific literature (including the *Diagnostic and Statistical Manual of Mental Disorders*, or DSM), they are not well defined there; mental health professionals instead prefer to understand both psychopathy and sociopathy as types of antisocial personality disorders (APDs), each condition being distinguished by a few characteristic features but both having many features in common.” *Encyclopædia Britannica* (britannica.com). Psychopaths are usually said to have little or no conscience whereas sociopaths do have a limited, albeit weak one. Sociopaths are often violent and show a total disregard of social conventions while psychopaths are more manipulative and will make a show of conforming if it serves their purposes.

At the time of writing, they are admissible in some courts in the USA (under certain conditions) but not in most other countries including the UK, Germany, Canada and Australia.

Polygraphs may often be used merely to encourage a suspect to confess by telling him or her that such a test is infallible and that lies can be scientifically identified. Chris Watts (see § 3) did so shortly after he had failed a polygraph test (something he had agreed to do before even being charged or seeing a lawyer). In many jurisdictions, the police are not obliged to tell the truth to people under investigation. Trying to convince suspects that the case against them is stronger than it really is constitutes a common tactic in some interrogative styles, especially in the so-called Reid technique (now largely discredited, which condones such strategies as deception and cajoling suspects into confessing on the flawed premise that an innocent person would never under any circumstances do so).

“Warrants detail Westerfield’s bizarre comment to police” CNN.com.lawcenter, July 12, 2002. http://edition.cnn.com/2002/LAW/07/12/ctv.westerfield.trial/

This transcript taken from *The Sun* newspaper 23/05/19: https://www.thesun.co.uk/news/9136616/maxine-carr-caught-out-tv-interview-ian-huntley/

Similarly, earlier on in the same interview from which Example 3 is taken, Chris Watts lets slip the following line “Bella *was* going to start kindergarten, next, next Monday” [our emphasis]. This indicates that, at the very least, he doubts she will be back by then.

On the night of the murders, she had been away visiting her mother in Grimsby, over 100 miles away.

This distinction made originally by Chomsky (1965), after de Saussure (1916), *langue* and *parole*. Chomsky has chosen to concentrate on abstract competence and ignore performance, precisely because the latter is so imperfect.

Testifying to a grand jury testimony (17 August 1998), Clinton stated that he and Lewinsky had engaged in an “improper physical relationship.”

Cf. Richard Nixon in 1973 at a press conference: “In all of my years of public life, I have never profited – never profited from public service. I’ve earned every cent. And in all of my years of public life, I have never obstructed justice”; Lance Armstrong in 2004 (winner of seven consecutive Tours de France, who received a lifetime ban in 2012 due to various doping charges) “I have never had a single positive doping test, and I do not take performance-enhancing drugs.”

It should be noted that contractions are not merely shortenings of words or abbreviations. They are manifestations of distinct syntactic processes, as seen by the fact that contractions and full forms do not always occupy the same position in clauses. Cf. “He was late, wasn’t he?” and “He was late, was he not?”

*American Murder: The Family Next Door* (2020).
It is worth noting that the act of naming and even calling someone by name has in many cultures a very important, sometimes almost magical, function (J. Lyons 1977: 218n).

In many transcriptions of this extract, given in popular newspapers and even cited in comments by professional profilers and experts of one sort or another, this is given as the even more marked *those kids* (see McClish www.statementanalysis.com/in-the-news/christopher-watts/), indicating psychological distance. We have checked the video itself and are of the opinion that it is *the kids*, and not *those kids*. Such discrepancies in the reporting of what people say, even in famous cases, alert one to another risk in the linguistic analysis of spoken discourse, namely that one cannot always rely on the transcripts or reports that one is given. The first stage in any serious analysis must be to verify the data.

This transcript is given on: www.thedenverchannel.com/news/crime/video-chris-watts-pleads-for-kids-wife-to-return-day-before-his-arrest-in-their-murders

See Langacker (2000: 175–6).

It is possible in some varieties and registers to speak about “the wife” or “the kids”, but this is normally jocular in tone: as if the speaker feels no special attachment to them. In the context where they were missing and one is worried about their safety, referring to them in this way (especially young children) is marked.

This is the conclusion of the ground-breaking linguistic analysis conducted by Coulthard at the request of those campaigning for Bentley to be posthumously pardoned and ultimately to have his conviction overturned (see Coulthard and Johnson 2007: 173–180).

Another crucial part in the linguistic evidence against him was that, according to police, he cried out to Craig “Let him have it Chris” – something denied by both him and Craig. This phrase is ambiguous. Bentley’s counsel, not wishing to challenge the police directly, argued that he did not mean “shoot him” but merely “give him the gun”. No proof was provided by the prosecution that, if Bentley did say it and he was indeed urging Craig to open fire, the latter even heard him. In any case, when Bentley supposedly said it, he was already in police custody and it was to be a further ten or so minutes before Craig fatally shot Miles (and there are questions about this too because there are many gaps in the ballistics analysis – indeed, the fatal bullet was never found – and there were also armed officers present, any of whom may have inadvertently fired the shot that killed Miles). Consequently, however one chooses to interpret the words, there does not seem to be any direct cause and effect relationship between Bentley calling out and Craig’s actions. The same phrase became the title of a 1991 British film about the affair (“Let Him Have It”).

As was the practice at the time, Bentley was hanged on 28 January 1953, just 7 weeks after his first conviction.

See Johnson (2001)

www.statementanalysis.com

For example, “We were standing on the hill. James looked at me with his feral gray eyes. He wadded up a piece of fabric – it was a light blue-violet shade and looked fluffy, like a bunched-up hairnet. ‘Put this in your underpants,’ he said.”

www.statementanalysis.com/in-the-news/e-jean-carroll/

Ironically, McClish is himself guilty of some “grammatical violation” in this extract. The phrase “Trump might have flirted with her and even hit on her” should read, a traditionalist would say, “Trump may have flirted with her and even hit on her.” In legal discourse, this is more than mere pedantry because to say something *might have happened* means it did not in fact but could have in other hypothetical circumstances which
never came into being (“The jury might not have found Bentley guilty if they had known that the Home Secretary would refuse to commute his death penalty to life imprisonment”). By contrast, *may have* means it is possible that something happened but the speaker is unsure whether it did or not (“Bentley may have cried out to Craig urging him to shoot”). In colloquial language, *may have* and *might have* have become largely synonymous – see Example 11 “I thought she might have snuck out or something snuck off to the funfair.” If McClish were aware of this rule and had analysed Example 11, he might [sic] have concluded that the suspect was revealing his guilt by saying in effect “It is possible that she would have gone to the funfair in other circumstances but I know that she did not in fact.” His own statement about Trump, taken at face value, could be interpreted as “It is possible that Trump would have flirted with her and even hit on her in other circumstances, but in reality did not” which falls short of refuting Carroll’s claims.

36 This transcript, which uses an adapted version of the conventions for conversation analytic research in psychology, by Jagodziński, in her master’s thesis (MS: 92–96).

37 It can be viewed at: www.youtube.com/watch?v=EdMDwQlUvnM&t=371s&ab_channel=SMITTYMOVIES

38 It is worth noting that due to police ineptitude searching the attic (they only found the by then badly decomposing body on their third inspection), the exact circumstances of Tia’s death were never established. The case against Hazell was not therefore “open and shut.” His confession of murder therefore came as a surprise coming as it did so early in the trial.

39 This transcript given by McClish on his *Statement Analysis* website: https://www.statementanalysis.com/cases/scott-peterson/#:~:text=Peterson%3A%20The%20focus%20is%20on,statement%20rather%20than%20question.

40 This transcript ours from the ITV1 documentary “Real Crimes: Crocodile Tears 2” (2002) available on YouTube at: https://www.youtube.com/watch?v=ZOs4bU9ZPA&t=752s&ab_channel=CrimeDocumentaries.

41 See Brown and Levinson (1987).

42 Good examples of this, contrasted with footage of guilty people’s reactions to direct accusations are provided on the YouTube video: “Guilty until proven innocent” on the JCS Criminal Psychology channel: www.youtube.com/watch?v=BemHqUqcpI8&t=2s&ab_channel=JCS-CriminalPsychology.

43 Of course, it is also marked that in “nothing was here” he is using the non-definite pronoun *nothing*, normally used to refer to objects, not people (cf. *no one/nobody*), to refer to his own family, as if he is dehumanising them.

44 For example, “The next thing that jumps out at me is the statement, ‘I actually received a phone call today.’ The shortest sentence is the best sentence. Extra words give us extra information. ‘I received a phone call today’ is a good statement.” (www.statementanalysis.com/cases/casey-anthony/).

45 Same source as Example 5.

46 This included burglary, theft, racially aggravated common assault and grievous bodily harm as well as two spells in prison (34 months for cocaine dealing and 12 months for possession of a machete in a public place). He had been put in care as a child because his father was in prison and his mother was a sex worker. He ended up in a homeless hostel where he claims that he was the victim of rape at the age of 16. Source: “Tia Sharp murder trial: Profile of Stuart Hazell” (https://www.bbc.com/news/uk-22515463).

47 Hazell’s own defence counsel, Lord Carlile QC, told the court in mitigation that he was a man “who has an extraordinary capacity for living through lies.”
This transcript is ours from the ITV interview broadcast in 2012 and available on YouTube at: www.youtube.com/watch?v=EdMDwQIUrM&ab_channel=SMITTY MOVIES

There were also no less than 55 reported sightings by members of the public.

He had wrapped up Tia’s body and hid it expertly in the loft with the intention of disposing of it later but, due to all the attention he had attracted (ironically, partly because his attempt to play the concerned step-grandfather backfired), he was unable to remove it from the house. This practical consideration accounts for his increasing desperation.

Regarding the quantity and type of detail in statements, in an experiment involving the use of sketching in interviews (a technique recently adopted by some UK police forces), it has been shown that truthful parties provide 76% more detail about experiences at the location of the event that they were being questioned about than deceptive ones do (i.e. those who were making the event up). The explanation offered by the authors (Vrij et al. 2020) is that drawing pictures and diagrams enhances the memory, something that cannot help a subject who has fabricated the whole event and thus who has no recollection of it as an experience.

The evidence points to the fact that Hazell, who downloaded child pornography, became infatuated with Tia. On a TV programme “Britain’s Darkest Taboos” (Series 3 Ep.2 2016), Dr Keri Nixon, a forensic psychologist, speculates that Hazell may have murdered Tia after she had rejected his sexual advances and threatened to expose him as a paedophile.

The clinical connection between a sensitive nose and stress is that the latter increases blood pressure pushing more blood into the nose, causing the dilation of tissues and mast cells. The latter typically begin to release histamine, which causes the itching sensation.

In some versions of the polygraph, testees are asked to give untrue answers deliberately after certain prompts as another way of gauging what their normal readings when being deceptive are.

The public prosecutor, Giuliano Mignini, who was behind many of these theories, is notorious also for his handling of the 2002 investigation of the death of Francesco Narducci, an apparent accident or suicide from 1985. This, he believed was linked to the more famous Mostro di Firenze (Monster of Florence) case through involvement of the Masonic lodge to which Narducci’s father belonged. Mignini had 20 people, including government officials and law enforcement officers, charged with conspiracy to cover up Narducci’s murder. All were acquitted although some vindication came for Mignini in the form of an overturning of the original “death by accident” verdict in the case of Narducci. In 2014, Italy’s Supreme Court, the Cassazione, ruled it “death by probable homicide committed by unknown persons.”

The most likely scenario for Meredith’s murder being that she disturbed Guede while he was burgling the flat and that he raped and murdered her: for all of which there is sound forensic evidence.

In June 2020, the public prosecutor in Braunschweig, Germany, opened investigations into a 43-year-old suspect, with previous convictions for sexual offences, who is known to have been in the Algarve at the time of Madeleine’s disappearance. No charges have yet been brought, but the fact that leads are still being followed shows that, despite the suspicions of many vocal commentators on the internet in the nearly fourteen years since Madeleine went missing, the parents have never been convicted, or even charged, and must be presumed innocent unless hard evidence to the contrary emerges.
The first part is a Case File Analysis, the second a Semi-structured Interview. The fourth and final part is the Validity Checklist where a trained evaluator reviews the results of the CBCA taking into account such variables as age and social anxiety (Köhnken, 2004), with an aim to entertain alternative interpretations of the data.

This approach is founded in the Undeutsch Hypothesis in psychology (Undeutsch 1967), according to which, for children, memories of self-experienced events differ in content and quality to memories of fabricated or fictitious accounts (Amadoa et al. 2015).

Many studies are critical of the Validity Checklist and how it is applied in practice by individual evaluators because this is an area where there is scope for much subjectivity and divergence among experts (see, for example, Akehurst et al. 2011).

Amadoa et al. (2015)

In one of his exercises inviting visitors to his site to test their skills at Statement Analysis, McClish presents an exercise (https://www.statementanalysis.com/test20252/) involving the use of the definite article the with gun which has strong echoes of the line form Bentley’s statement: “I did not know he was going to use the gun.” (See § 3), making the very same arguments that the prosecution in Bentley’s trial made.

This is a point that McClish, who places enormous faith in his own method (which he has commercialised), appears to reject: “With Statement Analysis, you do not have to establish any norms. Most of the time you can look at one question and one answer and determine if the person is being truthful. You can take one statement and obtain additional information from that statement. This is all possible because people mean exactly what they say” (www.statementanalysis.com/nonverbs/). The key phrase here is most of the time. To be admissible as evidence in a court, DD analysis has to work with a much higher, and much better qualified, degree of precision than this. An expert witness should be able to produce evidence of significance of the data that they present (e.g. run what statisticians call T-Tests). Ironically, it is difficult to know what to make of the last sentence. At face value, it seems overly absolutist and simplistic: to pose just one of the many questions that it raises, when a suspect unequivocally denies something and later confesses to it: did he or she mean exactly what he or she said on both occasions? McClish is perhaps referring only to cases like the examples discussed in § 3 where a speaker says something to reveal the hidden truth and gives him or herself away. The trouble lies therefore in knowing when exactly he or she means what he or she says, which takes us back to square one.

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