Deception is an evolutionary masterpiece with success lying in its variation. A new analytical approach examines deception as a progression, where the diagnostic value of linguistic cues depends on how they interact with other cues. This presentation outlines the latest developments in identifying deception in written witness statements and provides a new approach to deception analysis based on sound linguistic theory and empirical testing. Participants should have a good understanding of English grammatical construction and be able to calculate percentages as part of the analysis.

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This presentation deals with identifying deceptive linguistic strategies commonly associated with witness narratives written by English speakers.

**Introduction**

For as long as there has been life on Earth, there has been deception. The evolution of life is linked intrinsically with natural selection, which in turn is linked with deception. By successfully manipulating the behaviour of others, ostensibly by taking advantage of recipients’ own rules, deceptive organisms gain an advantage for themselves, increasing their own fitness and, in the process, ensuring that they are more likely to pass their genes on to the next generation. Thus, the convincing deceiver is a successful evolutionary adaptation.

In human terms, natural selection is linked to the development of communication, which is inseparable from deception. Human psychological mechanisms involved in speech acts that originally evolved to facilitate communication between people appear to have aided and abetted deception. The foundation of communication is built on the default belief that those communicating with us are being cooperative (*cooperative principle*) and that their communication is truthful, clear, relevant, and unambiguous (subscribing to the *maxims of conversation*). Consequently, we normally take information given by our communication partners at face value. This belief is so strong that people judge messages as truthful even when they are false and there are obvious signs of deception (Levine, Parks, & McCormack, 1999). Deception takes advantage of this, piggybacking on our communication behaviour like a parasite. While deceivers pretend to cooperate, they are in fact being deliberately uncooperative in intending to mislead. In effect, deception is *truth mimicry*.
To identify deception, researchers have long focused on how deceivers should behave differently to truth tellers. Research has been based largely on theoretical assumptions regarding how deception affects people’s thoughts, feelings, and cognitive processes, and how this might be reflected in language when people lie, compared to when they are telling the truth. Certain perspectives—emotion, cognitive load, and lack of embracement—have been identified, which psychologists believe underpin physical and linguistic cues to deception. However, these processes are hypothetical and have been identified retrospectively to explain differences in behaviour between deceivers and truth tellers (Memon, Vrij, & Bull, 2003). To date, the evidence is contradictory and no single cue (or group of cues) has been isolated that identifies deception across the board.

Evidence does exist that deceivers do experience some psychological processes more than truth tellers. While such behaviour may arise as a result of experiencing processes such as cognitive complexity, strong emotions, and the sort of attempted control associated with deception, they are not by themselves indicators of deception; merely that the processes are active in the individual. The same processes will be active in someone who is lying and worried about not being believed, and in someone who is telling the truth and worried about not being believed. Fear of not being believed leads both deceivers and truth tellers to make more of an effort to control what they think is nervous behaviour (Vrij, Mann, Leal, & Granhag, 2010) and try to be more convincing, resulting in unnatural behavior, which is misinterpreted by deception detectors, who judge truthful people to be lying. Ekman (2001) labels this the *Othello error*. 
### Linguistic Cues to Deception

Part of the difficulty in identifying linguistic cues to deception lies in the diverse verbal strategies deceivers adopt in order to conceal their lies. The different strategies and the ability of deceivers to quickly regulate and amend their approach in response to the situation make standardised deception detection over a broad range of contexts difficult.

Deception cues vary across media, language, and culture for simple psychological and linguistic reasons.

1. We use language differently when we speak and when we write. In speech, language expresses reality as a process; in writing, language expresses reality as an object. Where properties and processes are construed as verbs and adjectives in speech, the same processes and properties are construed as nouns in writing.

2. Linguistic cues as a deception signal are not constant across verbal contexts. Important differences are to be expected because time to construct the deception, pressure to respond to questions, and the attitude of the addressee all affect deception cues (e.g., differences are to be expected between deception in conversation, interview and interrogation, and monologue contexts, and whether the addressee is gullible, non-responsive, or challenging).

3. Neither are cues consistent across textual contexts. Deceptive language changes according to the opportunity for planning, rehearsal, response time, and editing in different textual media (e.g., differences are to be expected between instant messaging, email, and written witness statements).

In short, the diagnostic value of deception cues is not static, but depends on the context and media in which they are used. For this reason, the deception cues described in this
presentation have been validated only for witness narratives written by the individuals (i.e., English speakers) who experience the event being described.

**Identifying Deception in Witness Statements**

In this context, a written witness statement is defined as a *narrative* relating to an event witnessed or experienced by the individual writing the statement. A narrative (of personal experience) is a report of a sequence of events that has entered into the biography of the narrator. Narratives are not objective retellings of what happened (as opposed to simple observations) as narrators linguistically reconstruct reality to create meaning. They manipulate their narratives to get across their point of view through linguistic devices of factivity and causativity, reordering the structure, and selecting (and omitting) events to suit their personal theory of causality (Labov, 1997).

As a minimum, a narrative consists of two independent clauses containing the *reportable event* (i.e., what the statement is all about) separated by a temporal *juncture* (i.e., the time separating from each other the earlier and later actions reported in the clauses), where the interpretation of the order of events would change if the clauses were reversed (Labov & Waletsky, 1967). Fully formed narratives have a beginning, a middle, and an end.

**Narratives as a Progression of Episodes**

Credibility arises from addressees believing that the reportable event did indeed occur in real time (Labov, 2001). To achieve this, narrators have to introduce a chain of events that explain how the reportable event came about in order to get their theory of causality across to their audience.
Narrators use segmentation markers as grammatical signals to manage the flow of information in their story and facilitate readers’ understanding of events. These segmentation markers are created by deviating from standard sentence structures to rarer (marked) forms. *Marked sentence structures* are defined as those sentences that have an initial adjunct, subordinate clause or phrase, or prepositional phrase with an adverbial function (McEwen & Prideaux, 1997).

The creation of marked sentence structures is always deliberate and always context sensitive. These sentence structures serve to divide narratives into episodes, alerting readers to changes in continuity in the narrative. They highlight information contained in the sentence, drawing readers’ attention to major changes in topic (i.e., people and place) (example A), or to temporal shifts in the narrative (examples B and C); *then* serves to signal the temporal order of lesser events within a larger episode. Marked structures also highlight information the narrator considers important (examples D and E).

<table>
<thead>
<tr>
<th>Standard Sentence Structures</th>
<th>Marked Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) We met with a group of friends once we got to the train station.</td>
<td><em>Once we got to the train station,</em> we met with a group of friends.</td>
</tr>
<tr>
<td>B) The ambulance <em>arrived moments later.</em></td>
<td><em>Moments later,</em> the ambulance arrived.</td>
</tr>
<tr>
<td>C)</td>
<td>I put on my Raider basketball sweatshirt, and <em>then</em> the three of us left.</td>
</tr>
<tr>
<td>D) She didn’t put her bags on the x-ray machine when she was going through the metal detector.</td>
<td><em>When she was going through the metal detector,</em> she didn’t put her bags on the x-ray machine.</td>
</tr>
</tbody>
</table>
That is when I called the police about everything.

Episode segmentation markers are important as they reflect the narrators’ own subconscious decision to break the continuity of the narrative. Excessive narrative fragmentation is associated with artificial timelines commonly found in deceptive narratives. When a sequence of events is imagined or when temporal lacunae occur, the continuity of the narrative breaks down. Narratives fragment into multiple short episodes because the events described are not anchored in real time (Picornell, 2012).

**Deception as a Progression**

Analysts have tended to examine deception as if it were a separate communication activity with specific identifiable characteristics that distinguish it from normal truth telling. This perception is a myth. Deceptive communication is no different than default truthful communication. What makes deception different is its *internal gradient*, the series of successive changes to the language that allows deceivers to design a linguistic strategy best suited to their particular situation.

*Deception* is a progression of acts over time, not a one-time event. Deception involves managing and manipulating information as a continuous process to achieve a final deceptive presentation. The finished product (the deception) is a compilation of deceivers’ intentions (to tell the truth or to lie) and the choice of communication strategy to achieve that intent.

**Deception Strategies in Witness Narratives**

Deconstructing narratives into their constituent episodes allows for the linguistic profiling of individual episodes and
analysing the changing pattern of cue use in the language in order to identify the author’s deceptive linguistic strategy.

Two main linguistic strategies have been identified in witness narratives (Picornell, 2011):
1. Prolix and personal—A verbose approach with high immediacy and ambiguity. In this strategy, deceivers are cooperatively vague. They appear to be cooperative by having a high personal presence through the use of self-references (e.g., I, me, my) and by providing plenty of information, but this information is rendered safe through the use of linguistic devices that create ambiguity. Word classes and constructions associated with creating ambiguity are:

- Verb strings—Two or more verbs that function as a single verb (e.g., went to call, started yelling, tried to open, etc.)
- Negation—Words that indicate the act or process of negating or something that is without existence (e.g., no, not, nothing, no one; verbs prefixed by un, e.g., unsuccessful)
- Cognitive verbs—Verbs that identify a cognitive function (e.g., think, appear, etc.)
- Indefinite pronouns—Pronouns that refer to something unspecified (e.g., something, one, thing(s), etc.)

SINGLE EPISODE EXAMPLE:
Next thing I remember is the policeman on top of me punching me around my chest and me trying to grab his arms. I held his right arm, but he was still moving it like a punching motion. He was hitting around my left side and I felt something cold. He went to hit me again and something cut the palm of my left hand and it scared the hell out of me, so
**THE FLEXIBLE LIAR**

*I grabbed my side, curled up, and started yelling and screaming.*

2. Impersonal—In this strategy, deceivers become increasingly *other* or *jointly* oriented, resulting in high use of third person (e.g. he, she, they) or collective pronouns (e.g., we, us). Deceptive authors prefer to be absent, replacing *I* with *me* or *my*, ascribing the action to others, or diluting involvement by acting in concert with others. The information approach is direct.

**SINGLE EPISODE EXAMPLE:**

*Then, he told me to stop crying. He told me to stop the car. He took tape out and put it on my wrists.*

The words (in bold) shown in the single episode examples are deception strategy cues not because of what they are, but because of the way they interact with each other, how that interaction progresses throughout the individual episodes in the narrative, and the extent of their use (as measured by the percent of clauses in which they appear in the narrative).

The interaction and progression of particular word groups identify the use of linguistic strategies commonly associated with lying. It is important to recognise that one or both strategies (and variations) may be found within a single statement. Successful identification of deceptive strategies relies on a combination of identifying successive changes to episode linguistic profiles, as well as the overall clause measurement of cues in relation to other cues.

On a final note, if this analysis sounds complex, it is because deception is indeed linguistically complex. This presentation stresses that the diagnostic value of individual cues is not static, but depends on content, media, and their
association and interaction with other cues. If cues were constant, they would have been identified ages ago, and deception phased out as a communication construct. As it is, evolution indeed favours the flexible liar.
References


Statements for Analysis
Statements have been subdivided into their constituent clauses.

Chappaquiddick Statement
(Episode markers are identified.)

[On July 18, 1969, at approximately 11:15 p.m. in Chappaquiddick, Martha’s Vineyard, Massachusetts, I was driving my car on Main Street] [on my way to get the ferry back to Edgartown.] [I was unfamiliar with the road] [and turned right onto Dike Road,] [instead of bearing hard left on Main Street.] [After proceeding for approximately one-half mile on Dike Road,] [I descended a hill] [and came upon a narrow bridge.] [The car went off the side of the bridge.] [There was one passenger with me, one Miss Mary Kopechne, a former secretary of my brother, Sen. Robert Kennedy.] [The car turned over] [and sank into the water] [and landed] [with the roof resting on the bottom.] [I attempted to open the door and the window of the car,] [but have no recollection] [of how I got out of the car.] [I came to the surface] [and then repeatedly dove down to the car] [in an attempt to see] [if the passenger was still in the car.] [I was unsuccessful in the attempt.] [I was exhausted and in a state of shock.] [I recall walking back] [to where my friends were eating.] [There was a car parked in front of the cottage] [and I climbed into the back seat.] [I then asked for someone] [to bring me back to Edgartown.] [I remember walking around for a period of time] [and then going back to my hotel room.] [When I fully realized] [what had happened this morning.] [I immediately contacted the police.]

Abduction Sexual Assault
[I woke up] [and made the bed,] [had breakfast with Dave.] [I got Nicky ready for school.] [I took Nicky to school] [then Maria to work.] [I went to work.] [At quarter to one I went home for lunch] [and let Turbo out.] [At 1:45 I left] [to go back to work.] [A man jumped out on the road] [and fell down.] [I thought] [maybe I hit him] [but I didn’t hit him.] [I started to check on him] [and he pushed me in my car] [and then made me] [drive] [then he told me] [to stop crying.] [He told me] [to stop the car.] [He took tape out] [and put it on my wrists] [and then he cut my lips with his knife] [and then put tape on my mouth.] [He cut my blouse.] [He was angry] [cuz he said] [his damn knife was dull.] [He wanted a souvenir] [and he couldn’t get] [but he cut my hair.] [He started driving] [and telephoned someone] [and said] [to meet him at that place.] [He locked my keys in my car] [and then a yellow van came] [and got him.] [I waited for a while] [and then I started to walk.] [I tried to kick him] [and he grabbed my leg] [and my tights tore.] [He said stay still.]
Murder

[When me and Drew and Victor walked down the railroad track to the timber yard.] [I was carrying the rifle.] [I also had the pistol, a .22 stuck down my pants.] [The others didn’t know] [I had the pistol] [my shirt tail was covering it up.] [We approached this big tin building] [that they call the treating room.] [I peeped through this crack in the tin] [and I saw this guy] [throwing wood in the burner.] [I told the others] [to be quiet] [because there was someone in there.] [Danny told me] [to shoot with the rifle.] [he didn’t know] [I had the pistol.] [He kept saying] [shoot.] [so I gave the rifle to him.] [Danny took the rifle] [and stepped around on the side] [where the conveyor belt goes in.] [There is a big opening there.] [I took the pistol out] [and shot through the crack.] [There were only two bullets there.] [I took the pistol out] [and I shot through the crack.] [There were only two bullets in the pistol] [and I shot them.] [Then I heard the rifle] [start popping off.] [Sounded like about 10 or 11 shots.] [I heard] [the guy start hollering.] [I went around] [and went in the building.] [The guy was laying over a machine.] [You could see] [the guy’s billfold sticking out of his back pocket on the right-hand side.] [Danny reached] [and got the wallet.] [We went out the door on the other side between the two buildings.] [Vic was standing outside by the wood piles.] [Vic said] [that the guy probably got paid today.] [Danny opened up the wallet.] [It looked like] [there might be 80 or 90 dollars in the wallet.] [Vic pulled the money out] [and started to throw the billfold away] [and I said] [that I didn’t have a billfold] [and that I wanted that one.] [I kept the billfold.] [I took all the stuff out of the billfold] [and put it in a coffee can] [and carried it down around Blackwater] [and put it out beside the road.] [This was on the next day] [that I did it.]