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**Embedded Deception from Everyday Interactions to Investigative
Interviewing: Individual and Contextual Factors**

Ph.D. THESIS

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CHAPTER 1. THEORETICAL FRAMEWORK

1.1. Introduction and Motivation

Deceptive communication does not occur in a vacuum; it occurs at the interplay of individual differences and contextual factors. The first category, *individual differences*, pertains to factors such as personality traits (dark and light), attitudes toward lying, and deceptive motivations. Research has shown that higher levels of *dark personality traits* predict greater engagement in antisocial behaviors, such as lying and cheating (Forsyth et al., 2021; Jones & Paulhus, 2017), whereas higher scores on the so-called *light traits* (i.e., the Honesty-Humility scale of the HEXACO model) tend to have the opposite effect (Markowitz & Levine, 2021). A *positive attitude toward lying*, particularly toward prosocial lies, is associated with higher levels of engagement in deceptive behaviors (Buta et al., 2020; Buta et al., 2022). People are *motivated to lie* for different reasons: to gain moral or material advantages, or to avoid potential punishment. A general classification is based on the *beneficiary* of these lies: *the self or others* (DePaulo et al., 1996).

The second category, **contextual factors**, can be classified according to where the communication takes place. According to Applegate and Delia (1980, as presented in Markowitz & Hancock, 2019), the context can vary depending on whether communication occurs *face to face* or *through interposed media* (telephone, computer, text messages, etc.) (DePaulo et al., 1996; Hancock et al., 2004; Whitty et al., 2012). *Relational dynamics* also matter, as they indicate with whom and how often people interact with one another (Cantarero et al., 2018; DePaulo & Kashy, 1998). It is also relevant to consider whether the interaction takes place in a *formal or informal setting* (e.g., at the police station or at home). The *reason for communicating* matters (e.g., telling a story among friends or giving a statement to the police), but equally important is the *cultural context* in which the interaction takes place.

According to *truth-default theory* (TDT; Levine, 2014; 2019), people are generally honest in their interactions and lie only when telling the truth would harm their communicative goals. As a rule, people generally don't create an entirely deceptive discourse; rather, they integrate both truthful and deceptive information into everyday communication (McCornack, 1992; Morrison & McCornack, 2026). Most deception research uses a dichotomous approach to studying truth and lies, particularly in interviewing contexts. *Embedding lies* in an otherwise truthful account is considered a lying strategy and is often used as a *manipulation check* to ensure that participants followed the experimenter's instructions (Cacuci & Visu-Petra, 2026). Communication research derives most of its findings from qualitative studies of social interactions with close individuals. These divergent research directions have already been acknowledged (Morrison & McCornack, 2026), but more studies are needed to reconcile them.

1.2. Research Relevance

Building on the theoretical and methodological considerations above, the present thesis focuses on (a) daily interactions and (b) interviewing contexts, taking into account intra- and interindividual differences related to the quantitative and qualitative aspects of communication across different age groups and professional backgrounds. While several studies **offer new insights**, others **include a replication component** that explicitly assesses the replicability of previous findings.

Most previous research has focused on subsets of *dark personality traits*, such as the Dark Triad (Machiavellianism, narcissism, psychopathy) or the Dark Tetrad (to which sadism was added) (see Turi et al., 2022 for an overview). More recently, researchers have proposed an underlying "*dark core of personality*" that favors antisocial behaviors oriented toward personal gain, with little concern for others' well-being (Moshagen et al., 2018). *A new framework of the*

Light Triad has also emerged (Kaufman et al., 2019). To date, no comparisons have been made between these constructs.

Given that research comparing **deceptive communication across different media** in daily life has included different technologies, depending on when the studies were conducted (e.g., Hancock et al., 2004; Markowitz, 2022; Whitty et al., 2012), more recent information is needed to assess potential differences in how people lie face to face versus through *interposed media*. Moreover, although promising, **interviewing suspects in remote settings** remains under-researched.

Other context-related factors, such as the *interpersonal characteristics of the communication partner* (familiarity, frequency of interaction), can influence people's decision to lie. Further research is needed to better understand these dynamics, as the frequency of interactions may better predict deceptive behavior than the type of relationship with the interlocutor (Sanchez et al., 2021).

In interrogation contexts, situational opportunities related to *interviewing strategies* can also influence lying. At the intersection of **individual traits and the interviewing context**, most previous studies on police officers' beliefs and attitudes toward interrogation and the cues of deceptive behavior have been conducted in WEIRD (Western, Educated, Industrialized, Rich, and Democratic) countries. Few studies examine Eastern European police officers' perceptions of these topics. In interrogation contexts, what matters is the content of the information communicated, and previous research has shown that verbal indicators of deception can be reliably used to detect deceptive information (Bond & DePaulo, 2006; Hartwig & Bond Jr., 2014).

Finally, the importance of the **cultural and ethnic context** is often downplayed by statement validity assessment techniques, such as Criteria-Based Content Analysis (CBCA,

Undeutsch, 1989) (Davies, 1994; Godoy-Cervera & Higuera, 2005). More research is needed to investigate the potential challenges of using these techniques across different cultures when assessing children's statements.

1.3. Deception

It represents **a deliberate attempt**, meaning people engage in these behaviors even if they are not always successful (Masip et al., 2004; Vrij, 2008). Second, **lying strategies** can vary, from subtle and *covert* to *overt* (Stokke, 2018). It can be argued that using *embedded lies* in an otherwise truthful account may also be a covert strategy. **What is said** when lying can vary depending on the sender's goals (e.g., whether the emphasis is placed on factual or emotional details). Deceptive behavior can occur **through verbal or nonverbal means** (Masip et al., 2004). The accuracy of verbal and nonverbal cues in detecting deception has been extensively researched, and there is ample evidence that nonverbal cues have limited validity, whereas verbal cues can be used with confidence to differentiate between truthful and deceptive statements (Bond & DePaulo, 2006; Hartwig & Bond Jr., 2014). Finally, lying can **create a false belief** in the interlocutor or maintain a pre-existing one (Masip et al., 2004).

1.3.1 Theories of Deceptive Communication

Grice's Maxims and the Faucet Metaphor (Markowitz, 2020)

In his Theory of Conversational Implicature (1975), Paul Grice proposed four Cooperative Principles (or Maxims), which are arguably intrinsically linked to effective communication. First, the *Maxim of Quantity* assumes that the message is informative but also concise. Second, the *Maxim of Quality* refers to the truth value of the content, stating that the information should be true (i.e., what you say is what you actually believe). The third is the *Maxim of Relation*, which emphasizes that the information should be relevant and concise. Finally, the *Maxim of Manner*

reflects the clear, orderly way information should be conveyed. Accordingly, Markowitz (2020) translates these maxims into *the faucet metaphor*, indicating that, like water flowing through a faucet, information can vary in terms of (a) quantity, (b) quality, (c) relation, and (d) manner. In this metaphor, *quantity* refers to the **volume of information** provided. Turning to the *quality* of the information, which refers to its veracity, this can be compared to the temperature of the water. According to Markowitz (2020), truthful discourse would symbolize cold water, whereas hot water represents deception. IMT (McCornack, 1992) indicates that information is rarely composed of *bald-faced lies and bald-faced truths*, but rather that truths and lies coexist in ordinary discourse. These **degrees of deceptive behavior** are generally known as "*embedded lies*" (Markowitz, 2024; Loconte & Kleinberg, 2025).

Third, the *relation* of the information to the topic: water, like communication, can be imagined as clear (truthful) or murky (mixed with deceptive information). Finally, the way information is conveyed relates to the *manner* of communication. This can be focused (laminar flow) or diffuse (aerated or sprayed) (Markowitz, 2020), indicating the **strategies** used to convey a deceptive message.

Information Manipulation Theory (McCornack, 1992)

The basic principles of *Information Manipulation Theory* (IMT; McCornack, 1992; McCornack et al., 1992) assume that, rather than being entirely truthful (bald faced truths) or deceptive (bald faced lies), most everyday communication comprises a mix of both. Thus, in their daily interactions, people manipulate information in almost unlimited ways, subtly altering the truth. Building on these findings, the updated version of Information Manipulation Theory (IMT2; McCornack et al., 2014) proposes that people adapt their discourse on the spot, based on immediate conversational needs, rather than planning messages in advance.

Truth-Default Theory (Levine, 2014)

The second theory is **truth-default theory** (*TDT*; Levine, 2014; 2019), which assumes that most people are generally truthful in their daily lives. Because people generally tell few lies per day, the distribution of lies follows a positively skewed distribution (Serota et al., 2010). *TDT*, similarly to *IMT*, assumes that people are naturally oriented toward honest interactions, and lying occurs only when a particular goal cannot be achieved by providing truthful information. Thus, people are more inclined to assume that others are also honest. This tendency has been termed "*truth bias*", with research showing that people were more successful in correctly identifying true statements (61%) than lies (47%) (Bond & DePaulo, 2006). However, other studies have found that certain professional groups, such as police officers, may show the opposite tendency, being more inclined to assume that others are lying (the "*lie bias*") (Meissner & Kassin, 2002).

The Contextual Organization of Language and Deception Model (Markowitz & Hancock, 2019)

The last paradigm relevant to this thesis is the **Contextual Organization of Language and Deception** (*COLD*; Markowitz & Hancock, 2019; 2022; Markowitz et al., 2023). The first component refers to *psychological dynamics* and addresses the emotional and cognitive underpinnings of deceptive behavior. The second category concerns *pragmatic goals*, which are linked to the motivations for lying (e.g., out of self-interest, for the benefit of others, or to create or maintain a false belief in the interlocutor). The last category, *genre conventions*, shows that the language used in deceptive communication is tied to specific contexts and follows the explicit or implicit rules of a given context.

1.3.2 Planning, Credibility, Consequences

IMT and *TDT* assume that people are generally spontaneous in their deceptive accounts (Levine, 2019; McCornack et al., 2014; Serota et al., 2022); thus, they invest little planning or

effort in lying. Studies confirm some variation depending on the communication medium (Whitty et al., 2012). Another relevant aspect of lying is *how convincing people believe they are*. People tend to overestimate their lying abilities (DePaulo et al., 1996; Elaad, 2019) and see themselves as better than others at constructing credible lies (Zhang & Baryshevtsev, 2025). Another consideration concerns the perceived consequences of the lie being discovered. Since most everyday lies occur in low-stakes situations, people often consider their lies *inconsequential* (DePaulo et al., 1996; Serota et al., 2022; Whitty et al., 2012).

1.3.3. Lying Strategies

Lying strategies can include overt or covert lies, *outright lies*, *exaggerations* (or distortions), *embedded lies*, and *omissions* (or subtle lies) (Stokke, 2018; Leal et al., 2020). Most of these strategies map onto Grice's maxims of communication, as they reflect how truths and lies are interwoven in social interactions.

1.4. Individual Factors

1.4.1. Dark Personality Traits

Most research to date has focused on the so-called dark (or aversive) personality traits, mainly Machiavellianism, narcissism, psychopathy, and sadism. A more recent approach has focused on the common underlying core of these traits, the "*dark factor*" of personality (Moshagen et al., 2018). It comprises 12 traits related to maximizing personal gain by engaging in behaviors that may negatively affect others.

1.4.2 Light Personality Traits

While most research emphasizes the aversive nature of certain personality traits, a more recent approach focuses on the Light Triad of personality (Kaufman et al., 2019), which captures traits found in people with high levels of benevolence and compassion. Thus, it includes three dimensions: *Faith in Humanity*, *Humanism*, and *Kantianism*. To date, only two studies (Loconte

& Kleinberg, 2025; Makowski et al., 2023) have investigated the relationship between these traits and deceptive behavior, but their results were inconclusive.

1.4.3. Attitudes Toward Lying

A significant, replicable positive association exists between lying acceptability and lying frequency (Dykstra et al., 2024; McEvoy, 2021; Oliveira & Levine, 2008; Yarbrough & Hart, 2025). Several studies have found that individuals scoring higher on dark trait scales reported higher self-perceived effectiveness when lying (Semrad et al., 2019; Wright et al., 2015, but see also Hare et al., 1989), although this relationship is not always direct.

More recent approaches propose a core set of attitudes and behaviors associated with lying, measured through *dispositional lying* (Makowski et al., 2023). This constitutes a composite measure of the reported ability to lie successfully (*Ability*), the self-reported tendency to lie (*Frequency*), the negative attitude toward lying, based on internal factors such as moral values (*Negativity*), and the acknowledgment that lying depends on context (*Contextuality*).

In turn, law enforcement officers hold beliefs about deceptive behavior, but these relate to how they can detect it during interactions with suspects. The literature generally shows that most practitioners still consider nonverbal cues relevant to determining whether someone is lying (Bogaard et al., 2014; Kassin et al., 2007).

1.4.4. Attitudes Toward Interviewing and Suspicion in Interrogation

Several large-scale studies (Kassin et al., 2007; Brimbal et al., 2024; Schell-Leugers et al., 2026) have examined police officers' perceptions of suspect interviewing. A positive shift has occurred from confrontational approaches to ethical, information-gathering tactics.

Another factor is potential police officer bias, such as the tendency to judge statements as deceptive, commonly referred to as *lie bias* (Meissner & Kassin, 2002).

1.4.5. Self-Oriented and Other-Oriented Lies

Consistent with TDT assumptions, lying most often occurs when telling the truth could be detrimental to one's goals (Levine, 2019). However, people may lie to protect themselves or to avoid potential punishment. Dark traits, for instance, are positively associated with self-serving lies (Jonason et al., 2014; Serota et al., 2024; Yarbrough & Hart, 2025). On the other hand, people may also lie to protect others. Altruistic lies may be more frequent in close relationships than in distant ones (Kashy & DePaulo, 1996; Vrij et al., 2010; Whitty et al., 2012).

1.5. Contextual Considerations

1.5.1. Face-to-Face Communication and Interposed Media

How people tell the truth or lie through various communication media has been a relevant topic for research over the past decades (DePaulo et al., 1996; Hancock et al., 2004; George & Carlson, 2005; Markowitz, 2022; Vrij et al., 2010; Whitty & Carville, 2008; 2012). Two general criteria are used when comparing media. Namely, whether they are **direct** (e.g., face-to-face) or **mediated/interposed** (e.g., telephone, instant messaging, SMS). Accordingly, several competing theories have been proposed to explain these preferences for certain media: the *feature-based model*, *social distance theory* and *media richness theory*.

1.5.2. Interpersonal Characteristics

People's tendency and motivation to lie may depend on **how close they are** to their conversation partner. Several studies indicate that people tend to avoid lying to family members or close friends (DePaulo et al., 1996; DePaulo & Kashy, 1998; Vrij et al., 2010). More recently, Sánchez et al. (2021) suggested that relational closeness and ***opportunities for interaction*** may have been correlated in previous research, helping explain the significant negative association with the frequency of lying (DePaulo et al., 1996).

1.5.3. Situational Opportunities

The aim of an effective investigative interview is to establish what happened; it is often assumed that truthful individuals are prepared and will provide a clear and detailed account on the first attempt. One promising strategy for encouraging truthful individuals to recall more detailed information, particularly about central events, is the Segmented Interview Approach (Deeb et al., 2025).

1.5.4. Cultural Differences

Last but not least, culture is relevant to research, as social norms and values can shape how people pursue their communicative goals (Tabata & Vrij, 2023). Although most studies on deception cues and truth assessment methods have been conducted mainly in Western, educated, industrialized, rich, and democratic countries, it is essential to consider how culture may influence a person's verbal statements.

1.6. An Integrative Model

The present work focuses on the interaction between individual differences and contextual factors in the assessment of deceptive content, building on previous theories of deception (IMT, McCornack, 1992; TDT, Levine, 2014; 2019) and incorporating several of the principles of the COLD model (Markowitz & Hancock, 2019; Markowitz et al., 2023). Figure 1 presents the proposed working model and the main factors investigated.

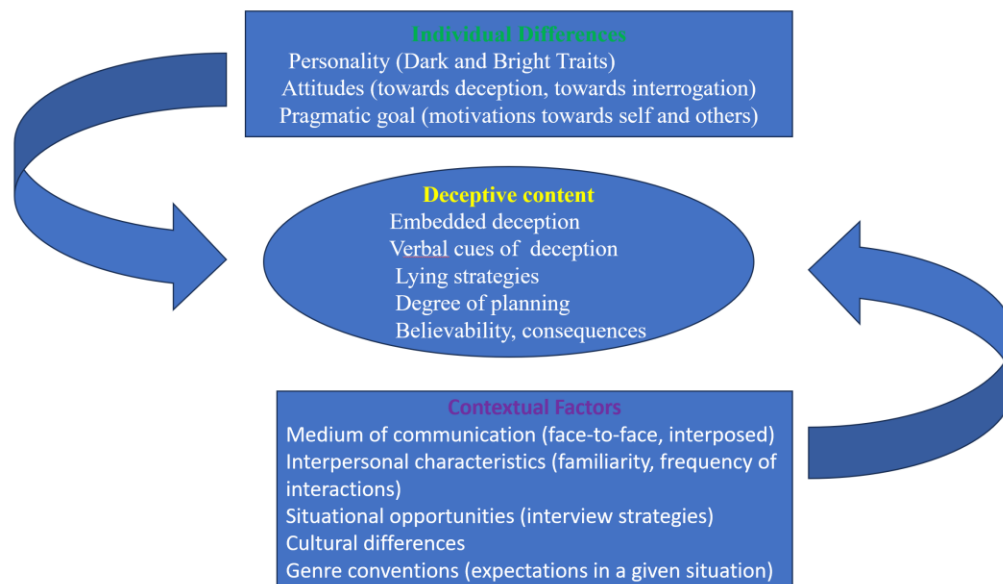


Figure 1. *Diagram of the working model proposed in the present thesis*

CHAPTER 2. RESEARCH OBJECTIVES AND GENERAL METHODOLOGY

2.1. Theoretical Objectives

Objective 1 - summarizing the existing literature (*scoping review*) and developing a clearer understanding of how research on investigative deception explores truths, lies, and **embedded lies** in investigative contexts.

Objective 2 - addressing not only everyday lies but also how truthful interactions take place daily, by investigating: (a) the **coexistence of truths and lies** in everyday contexts, (b) how the **interaction medium** (face-to-face vs. interposed) influences truths and lies, (c) how the **type of relationship** (close vs. distant) and the frequency of interaction between participants influence the occurrence of lying, and (d) how several **additional pragmatic aspects of communication** relate to truthful or deceptive daily interactions.

Objective 3 - examining **personality traits** (dark and light), as well as **individual attitudes and perceptions toward lying**, and their impact on the **motivation to lie, credibility, degree of planning, and communication medium**. Additionally, exploring the relationship between **embedded lies and personality traits**.

Objective 4 – examining the characteristics of **truthful and deceptive interactions** in everyday contexts, including **embedded lies, in an adolescent population**. Subsequently, assessing the relationship between **light traits, callous-unemotional traits, and lying frequency**.

Objective 5 – extending previous findings on the content of adults' daily interactions (DePaulo et al., 1996) by **mapping not only the deceptive information** provided, but **also the truthful information and embedded lies**, considering (a) the content and (b) the referent of the message.

Objective 6 – exploring the attitudes of Romanian law enforcement officers toward (a) interrogation tactics and (b) nonverbal and verbal cues to deception, while also analyzing suspicion in interrogation.

Objective 7 - investigating differences between truthful and deceptive statements during interviews, focusing on face-to-face versus remote contexts, in terms of the amount of detail provided in a mock suspect interview. The study also examined the effectiveness of the temporal segmentation approach compared to the free recall strategy in generating detailed accounts and in detecting cues to deception.

Objective 8 – exploring the extent to which personality traits (dark and light) influence how participants use lying strategies during a mock investigative interview.

Objective 9 – providing a theoretical review on the impact of cultural and ethnic factors on Criteria-Based Content Analysis.

2.2. Methodological Objectives

Objective 1 – adapting the Social Interaction and Deception Form (SIDF, DePaulo et al., 1996) and including a measure of the "degree of deceptiveness" in both adult and adolescent samples.

Objective 2 – assessing how the Light Triad scale (Kaufman et al., 2019) relates to deceptive behavior and comparing it with the Dark Factor Inventory (Moshagen et al., 2018),

Objective 3 - assessing dispositional lying traits (Makowski et al., 2023).

Objective 4 - exploring Romanian law enforcement officers' perceptions of interrogation techniques by adapting the questionnaire on ideal interrogation approaches proposed by Cleary and Bull (2019). Additionally, investigating their perception of verbal and nonverbal cues to deception by adapting and extending the questionnaire proposed by Strömwall & Granhag (2003).

Objective 5 – testing the usefulness of the temporal segmentation technique, adapted from the National Institute of Child Health and Human Development (NICHD) Protocol (Lamb et al., 2008;

Lamb et al., 2011), in encouraging the provision of additional details during a mock suspect interview.

CHAPTER III. ORIGINAL RESEARCH CONTRIBUTIONS

3.1. Study 1. A Scoping Review on the Embedded Deception Research¹

3.1.1. Introduction

Communication research proposes a theoretically consistent and sound perspective on how truths and lies, rather than being exclusively "*bald-faced truths and bald-faced lies*", stem from the same source; thus, it would make sense to approach them as such (Morrison & McCornack, 2026; McCornack et al., 2014; McCornack, 1992). From an investigative interviewing perspective, although people may use lies within an otherwise truthful account to appear credible, this topic remains largely neglected. Preliminary findings raise important questions about effective strategies for detecting deceit.

Thus, although *embedded lies* occur frequently and this mixed information can affect the ability to accurately detect deception (Vrij et al., 2008), research on this phenomenon remains limited. This work explores the current state of the literature on truths and lies embedded in the same statement, as well as the individual and contextual factors associated with this lying strategy.

Moving Beyond the "Truths vs. Lies" Dichotomy

This work defines *truthfulness* as the information considered genuine at the time of utterance, including feelings, emotions, thoughts, and actions, as perceived by the communicator. Next, the definition of *deception* is "the deliberate attempt, whether successful or not, to conceal, fabricate, and/or manipulate in any other way factual and/or emotional information, by verbal and/or nonverbal means, in order to create or maintain in another or in others a belief that the communicator himself or herself considers false" (Masip et al., 2004, p. 148). Finally, *embedding* includes deceptive (or truthful) elements in an otherwise truthful (or deceptive) narrative

¹ The content of this subchapter overlaps with the publication **Cacuci, S-A. & Visu-Petra, L.***(2026). A Scoping Review of the Literature on Embedded Truths and Lies in Investigative Research. *Cognition, Brain, Behavior: An Interdisciplinary Journal*. 30(1), 63-103. <https://doi.org/10.24193/cbb.2026.30.04>

(Markowitz, 2024; Vrij et al., 2008). Communication research suggests that, rather than being separate and immiscible, truths and lies can coexist within a single message (McCornack, 1992; Morrison et al., 2020; Morrison & McCornack, 2026).

Criteria for Truth and Deception in Investigative Research

Although there is no "Pinocchio's nose" that can unequivocally tell experts that a person has lied, verbal cues have been shown to yield more accurate results than nonverbal ones in detecting deception (DePaulo et al., 2003; Sporer & Schwandt, 2007; Vrij, 2008). Several techniques, such as *Criteria-Based Content Analysis* (CBCA; Undeutsch, 1989), the *Reality Monitoring Approach* (RM; Johnson & Raye, 1981), the *Verifiability Approach* (VA; Nahari et al., 2014), or *Context-Embedded Perception* (CEP; Nisin et al., 2022), are used to assess the veracity of verbal content. There are also a few cues that would appear in deceptive rather than truthful accounts. For example, there are the criteria of *common knowledge* (i.e., general information considered easy for anyone to provide) and *self-handicapping* (*self-handicapping*, i.e., remarks or justifications meant to explain why certain details cannot be provided) (Vrij et al., 2021; see also Sporer & Masip, 2023 for a detailed overview of other criteria from various investigative techniques).

In addition, specific interviewing techniques, such as the Strategic Use of Evidence (SUE; Granhag & Hartwig, 2014; Vrij & Granhag, 2012), can contribute to detecting deception during investigative interviewing. The reality is that, although we generally use the concept of "cues to deception", most of these cues address aspects related to truth-telling rather than lying (DePaulo et al., 2003). Since communication can comprise both truthful and deceptive information, it is relevant to assess how these proposed techniques distinguish between truthful, deceptive, and "mixed" messages.

Lying Strategies

When lying, people use numerous strategies to appear convincing (e.g., outright lies, omissions, exaggerations) (Leal et al., 2020) and rarely rely on just one. Given the topic of the present work, this study focuses specifically on the strategies of "*embedded lies*" and "*staying close to the truth*". Both assume that people rely on genuine information as much as possible because it is less cognitively demanding, easier to remember, and generally more plausible (Strömwall & Willén, 2011; Vrij et al., 2012).

3.1.2. Search Strategy

The present work followed the PRISMA guidelines (Liberati et al., 2009).

Database searches. For this stage, several searches were conducted in the following electronic databases: Web of Science, PsycInfo, ScienceDirect, and Google Scholar (first 100 results). The following terms were used as search keywords: "embedded deception", "embedded lies", "embedded truths", "stay close to the truth", "deception strategies embedding", "deception strategies stay close to the truth". We conducted the search in 2025 and early January 2026 and included all articles published in English up to December 2025.

3.1.3. Results and Discussion

Assessing Embedded Lies in Interviewing Contexts

Our synthesis indicates that research on embedded lies falls into two broad categories, depending on how "embedding" was conceptualized. On the one hand, only a few studies instructed participants *to explicitly use embedded lies* within an experimental condition. However, asking participants to structure their narratives in a particular way bears little resemblance to how statements arise in real-life contexts. A few studies made an important shift: they asked participants to lie or tell the truth, and then to explicitly indicate whether a statement was truthful or deceptive.

These studies aim to move beyond comparing broad categories of details in order to examine the linguistic characteristics of each type of discourse (Loconte & Kleinberg, 2025; Markowitz, 2024).

In contrast, most reported studies asked participants to describe, before or after the interview, the spontaneous strategies they used to appear credible. Most often, "embedded lies" and "staying close to the truth" were among the top choices. This approach may better reflect real-life scenarios, in which, at the time of the interview, the objective, factual truth is often unknown, as is the individual strategy suspects use to appear credible. These findings highlight that statements are almost never entirely deceptive.

Characteristics of Embedded Lies

An important finding is that embedded lies are most often based on previously experienced events, and their level of detail can vary depending on the surrounding information. According to reports, on average, a deceptive statement consists of two-thirds truthful information and one-third embedded lies (Loconte & Kleinberg, 2025). Furthermore, creating a plausible story by combining truthful and deceptive elements takes more time and is, according to the studies, more cognitively demanding (Caso et al., 2023). Finally, the amount of truthful or deceptive information reported within a deceptive statement varied across studies depending on the experimental manipulation.

Individual Differences Associated with Embedded Lies

Only two studies have explicitly assessed the individual and linguistic factors associated with embedded lies (Loconte & Kleinberg, 2025; Markowitz, 2024). To date, no clear relationship has been identified between the use of embedded lies and any of these measures.

Detecting Embedded Lies

Some studies suggest that embedded lies resemble truths more closely, making them harder to assess, even with automated deception detection methods (Loconte & Kleinberg, 2025). Other

data show that, at least to some extent, specific verbal cues, such as complications, spatial, temporal, and verifiable details, can be used to better differentiate between categories of information (Boskovic et al., 2019; Deeb et al., 2022; Harvey et al., 2017; Verigin et al., 2020, Verigin et al., 2021). However, current statement validity assessment strategies can easily miss these nuances, and further studies are needed to better understand what works and the underlying mechanisms.

3.2. Study 2A. Truthful and Deceptive Communication in Everyday Settings ²

3.2.1 Introduction

In everyday interactions, people can manipulate information in almost unlimited ways to serve their communicative goals (McCornack, 1992; Morrison & McCornack, 2026). An emerging line of research shows that truth can also be conveyed within deceptive statements, with accurate details used strategically to enhance credibility or manage impressions (Markowitz, 2024).

This research aimed to explore not only everyday lies but also how truthful interactions unfold throughout the day. Our objective was to investigate (a) how truths and lies coexist in daily contexts, (b) how the interaction medium (face-to-face vs. interposed) influences truths and lies, (c) how the type of relationship with the conversation partner (close vs. distant) and the frequency of interaction between participants influence the frequency of lying, and (d) how several additional pragmatic aspects of communication relate to truthful or deceptive daily interactions.

We hypothesized that deceptive interactions would contain a mixture of deceptive and truthful information (*Hypothesis 1*). We explored whether people lie more, less, or equally through interposed media (e.g., e-mail, telephone, instant messaging) compared to face-to-face interactions (*Research Question 1*). We predicted that, outside the laboratory context, people would report deceptive interactions as shorter than truthful ones (*Hypothesis 2*). We hypothesized that the number of lies would be more strongly positively associated with the frequency of interaction than with relational closeness (*Hypothesis 3*). We expected people to rate their lies as self-serving more often than as serving others (*Hypothesis 4*), although we also expected a small proportion of lies to be altruistic. We hypothesized that planned lies would be told mainly through interposed media and that there would be a positive association between the degree of planning and the perceived

² The content of this subchapter overlaps with the manuscript Cacuci, S-A., Masip, J., Serota, K., & Visu-Petra, L. (2026, *under review*) Truth Be (Sometimes) Told. Truthful and Deceitful Communication in Everyday Contexts.

consequences of the lie being discovered (*Hypothesis 5*). We predicted that people would report that most of their lies were believed by their conversation partner(s) (*Hypothesis 6*). We predicted that most lies would be trivial and inconsequential (*Hypothesis 7*). Finally, in line with Whitty et al. (2012), we expected more serious lies to be told through interposed media (*Hypothesis 8*).

3.2.2. Method

Participants

We recruited 94 participants from a university city in Romania, who completed a daily diary for 14 days. Participants who provided inconsistent information on seven or more days ($n = 8$) were excluded. We removed three other participants because they repeatedly failed the *attention checks*. Thus, the final sample included 83 participants (76 female and 7 male; $Mdn_{age} = 23.0$, $SD = 9.80$, age range = 18-65 years). One third ($n = 27$) of the participants were undergraduate students, and two thirds ($n = 56$) reported holding at least a bachelor's degree. All but two participants reported Romanian nationality; one reported dual Romanian and Hungarian nationality, and another reported Hungarian nationality. Participants completed the daily diary in Romanian.

Procedure

We used an adapted version of DePaulo et al.'s (1996) *Social Interaction and Deception Form*. Each day, participants were first asked how many interactions they had had during the day and how truthful these interactions had been overall (from 0 = *completely deceptive* to 10 = *completely truthful*). They were then asked whether they had had at least one truthful interaction (*yes/no*); if so, they were asked to think of a specific truthful interaction from that day and to answer several questions about that interaction. Next, they were asked whether they had had at least one deceptive interaction and, if so, they were asked to think of a specific deceptive interaction from that day and to answer questions with reference to that interaction.

The specific questions, for both truthful and deceptive interactions, addressed (a) the *medium* through which the interaction took place (face-to-face, e-mail, telephone, text messages, video call/videoconference, social media, other), (b) the *duration* of the interaction, (c) the *number of participants*, (d) the *relational closeness* between the participant and the conversation partner(s), (e) *how often the participant interacts* with the conversation partner, (f) the extent to which the participant was *advantaged or disadvantaged* by the information provided, and (g) the extent to which the conversation partner was *advantaged or disadvantaged* by the information provided by the participant. Additionally, exclusively for deceptive interactions, the following questions were also asked: (h) *how deceptive* the interaction was; (i) how *planned* the deceptive information was; (j) the extent to which the participant believes they were *believed* by the conversation partner(s); and (k) how *serious* the consequences would be if the information were discovered to be deceptive. We also included attention check items (adapted from Huang et al., 2015 and generated based on Oppenheimer et al., 2009), which were displayed randomly. We excluded participants who missed one third of the total items presented.

3.2.3. Results and Discussion

This study built on previous daily diary research on the frequency of lying, communication across multiple media, the dynamics of the sender-receiver relationship, and the pragmatic aspects of communication. Our main findings confirmed previous results, reiterating that everyday communication is largely truthful and that most lies occur within predominantly truthful interactions. Most truthful interactions took place face to face, but deceptive interactions occurred with similar frequency face to face and through interposed media. These deceptive interactions were shorter, directed at people with whom the respondent interacted often, self-serving, unplanned, brief, and low-stakes. When lies were planned, the likelihood of using interposed media increased. People also perceived their own lies as credible.

3.3. Study 2B. Personality Traits and Attitudes Toward Lying in Relation to Daily Deceptive Interactions Measures³

3.3.1. Introduction

This study examines the interaction between *individual* factors (dark and light personality traits, attitudes toward lying and credibility, perceived benefits of lying for self and others, and lying strategies) and *interindividual or contextual* factors (communication media) in truthful and deceptive communication. We assessed interactions and outcomes over a 2-week period using the daily diary method.

3.3.2. The Present Study

We aimed to investigate personality traits, individual attitudes and perceptions about lying, and their impact on daily lying over a 2-week period. Examining *personality characteristics*, our first research question (*RQ1*) addressed how dark and light personality traits relate to dispositional measures of lying. Specifically, we hypothesized that dark traits would be associated with a higher self-perceived ability to lie (*H1a confirmatory*), with an increase in the frequency of lying (*H1b confirmatory*), with a less negative attitude toward lying (*H1c confirmatory*), and with a greater understanding of the relevance of the context in which lying occurs (*H1d exploratory*). Regarding the light trait dimensions, we expected them to be associated with a lower perceived ability to lie (*H2a exploratory*), a lower frequency of lying (*H2b exploratory*), and a less favorable perception of lying (*H2c exploratory*), while also favoring a lower understanding of the relevance of the context of lying (*H2d exploratory*).

Focusing on the measures included in the daily diary, we investigated how dark and light traits relate to the *characteristics of lies*. We predicted that individuals with more pronounced dark

³ The content of this subchapter overlaps with the manuscript Cacuci, S-A., Masip, J., Serota, K., & Visu-Petra, L. (2026, *in preparation*). Looking at the bright side of daily life. How dark and bright traits influence everyday deceptive communication.

traits would report a greater self-oriented benefit when lying than individuals with lower levels of these traits (*H3 confirmatory*). Next, we expected the self-reported ability to lie to be positively associated with rating one's own lies as more credible (*H4 confirmatory*). Although most everyday lies are spontaneous (Serota et al., 2022), we predicted that the perceived ability to lie would be negatively associated with planning (*H5 exploratory*). In line with the emerging literature on this topic, we wanted to assess whether dark traits would be associated with more lies in mediated communication (*H6 exploratory*). Next, given the limited number of studies addressing embedded lies and personality traits, we explored whether embedded lies are positively related to dark traits and negatively related to light personality traits (*RQ2*).

3.3.3. Method

Participants

Initially, we recruited 94 individuals from Babeş-Bolyai University to participate in a study using the daily diary method. Engagement in completing the diary was assessed using a series of *attention check items* (adapted from Huang et al., 2015 and Oppenheimer et al., 2009), inserted randomly throughout the daily form. Participants who missed one-third of these attention checks were excluded. In addition, we excluded participants whose reports contained inconsistent responses for at least 7 days. The final sample consisted of 83 participants (91.56% female, 8.43% male, *Mdn* age = 23, *SD* = 9.80, age range = 18-65 years). Almost all participants (98%) reported Romanian nationality, and 67% held at least a bachelor's degree.

Procedure

Participants were recruited online and during classes at the Faculty of Psychology, Babeş-Bolyai University. After signing an informed consent form, participants completed a set of questionnaires measuring dark and light personality traits, as well as dispositional lying

characteristics. They also completed an online form (the daily diary) for 14 consecutive days. The diary addressed participants' daily truthful and deceptive interactions.

Personality scales

We assessed dark personality traits using the 35-item short form of the *Dark Factor Inventory* (DFI; Moshagen et al., 2020). The DFI captures the latent "dark core", defined as the common dispositional tendency reflected in traits such as narcissism, psychopathy, Machiavellianism, sadism, spitefulness, frustraalia, crudelia, psychological entitlement, moral disengagement, greed, and egoism. The short version allows only calculation of a total dark traits score, as it lacks enough items to assess individual dimensions.

The Light Triad Scale (LTS; Kaufman et al., 2019) consists of 12 items assessing Faith in Humanity, Humanism, and Kantianism.

We used an adapted version of the *Lying Profile Questionnaire* (LIE; Makowski et al., 2023), which measures four latent dimensions of lying: self-reported frequency, ability, negative view of lying, and contextuality.

The Daily Diary

The daily diary was an adapted version of DePaulo et al.'s (1996) *Social Interaction and Deception Form*. Over 14 days, participants completed the questionnaire once a day. They were initially asked how many interactions they had had during the day and whether they had had at least one interaction that included deceptive information (yes/no). If they answered "yes", follow-up questions were presented about a specific deceptive interaction (if a participant had several interactions during the day, they answered these questions considering only one, of their choice). These additional questions requested information about (a) the medium of the interaction (face-to-face versus interposed) and (b) the extent to which the lie was beneficial to (i) the self and (ii) the recipient of the lie (two scales from -10 = *very disadvantaged* to +10 = *very advantaged*). They were

also asked (c) how deceptive the interaction was (scale from 0 = *completely truthful* to 10 = *completely deceptive*), (j) how planned the information was (1 = *not at all* to 9 = *completely*), (k) the extent to which they believed their lie was believed by the conversation partner (1 = *not at all* to 9 = *completely*), and (l) the potential seriousness of the consequences if the lie were detected (1 = *not at all serious* to 9 = *very serious*).

3.3.4 Results and Discussion

Our findings show that higher scores on dark traits are associated with a higher frequency of lying (measured with the LIE scale and in the daily diary) and with a more positive attitude toward lying. Dark trait scores also predicted higher contextuality acknowledgment. Only Kantianism traits were moderately associated with a negative attitude toward lying and with a lower frequency of lying (measured both through the LIE and in the daily diary). In our sample, a higher self-perceived ability to lie was not significantly associated with telling more credible lies, nor with the degree of planning. Furthermore, unlike previous research, more pronounced dark traits were not associated with more self-serving lies. Finally, we found no significant association between DT levels (low, medium, high) and lying through interposed media.

Personality and the Characteristics of Lies

Consistent with previous research, we found that individuals with higher scores on dark personality dimensions are more likely to report a higher frequency of lying (Serota et al., 2024) and more positive attitudes toward lying. The authors who developed the LIE scale have already reported an association between dark trait scores and greater acceptance of deceptive behavior (Makowski et al., 2023). In our sample, dark trait scores were modestly associated with the understanding that lying is a context-dependent behavior.

For the Light Triad, only one of the three dimensions yielded moderately statistically significant results in relation to a few dispositional lying traits. Specifically, in our sample,

Kantianism traits were associated with a rather negative perception of lying (see also Ong & Nilsen, 2025). This also translated into a lower frequency of lying reported both for the LIE scale and for the deceptive interactions described in the daily diary.

Our findings did not support the assumption that dark traits would be more frequently associated with self-oriented lying (Moshagen et al., 2018, 2020). Our predictions regarding a positive association between the ability to lie and credibility were supported neither (a) by the LIE measure nor (b) by the daily diary reports. Moreover, we did not find a statistically significant relationship between the ability to lie and the degree of planning either. These null effects may be the result of the fact that most lies in everyday life are insignificant and inconsequential (Serota et al., 2024); thus, people, regardless of their ability to lie or their score on the dark traits scale, consider their lies sufficiently credible ($M = 7.35$, $SD = 1.17$).

We found no significant association between aversive traits and the use of embedded lies. This result is consistent with the results of the other two studies addressing this emerging topic (Loconte & Kleinberg, 2025; Markowitz, 2024). Finally, we could not replicate Verigin et al.'s (2019) finding that self-reported ability to lie was associated with the use of embedded lies. However, unlike Verigin et al., we did not ask participants to report the strategies they used to lie; instead, we asked them to rate the degree of deceptiveness of their lies.

Communication Media

Research shows that several antisocial behaviors in the online environment are associated with higher levels of dark traits (e.g., Hidalgo-Fuentes et al., 2025; Moor & Anderson, 2019). However, we found no differences between individuals with low, medium, and high dark trait scores in terms of how often they lied face-to-face or through interposed media.

3.4. Study 3. Personality Traits, Attitudes Toward Lying, and Daily Diary Reports in a Romanian Adolescent Sample⁴

3.4.1. Introduction

A constellation of individual and contextual factors shapes truthful and deceptive behavior across the lifespan, with lying being like a kaleidoscope through which we can view multiple aspects of children's sociocognitive functioning at each developmental stage (Talwar & Lee, 2008). The present study examines lying among Romanian adolescents, exploring the interplay between behavioral, attitudinal, and motivational aspects in relation to emerging dark and light personality traits, using the ecological daily diary method. The few studies that have investigated deceptive behavior in adolescence have either used an experimental paradigm, such as the sender-receiver game (Glatzle-Rutzler & Lergetporer, 2014), or relied on self-reported attitudes toward lying and the self-reported frequency of lying at a single point in time (Buta et al., 2022; Dykstra et al., 2023; Levine et al., 2013). An intermediate technique between subjective self-report and experimental paradigms is to ask participants to write down details or answer questions about their truthful or deceptive interactions, in a daily diary format, over several days. This method has been used in a few studies investigating lying in adult samples and has proven effective in capturing dynamic changes depending on context (DePaulo et al., 1996; Markowitz, 2021).

3.4.2. The Present Study

The present study aims to extend the emerging literature on lying in adolescence, seeking to predict adolescents' attitudes toward lying, as well as the actual frequency of lying, taking into account personality traits (i.e., *callous-unemotional* traits and light traits) and motivations (self-

⁴ The content of this subchapter overlaps with the manuscript Cacuci, S.-A., Magyarossy, N., & Visu-Petra, L. (2026, *in preparation*) More than meets the “I”. Personality traits, attitudes towards lying, and daily diary reports of deception in a Romanian adolescent sample.

oriented versus other-oriented lying) over the course of a week, while also accounting for social desirability. The present study was based on a pilot study involving 13 adolescents who completed a daily diary for 6 days.

First, we aimed to investigate the **characteristics of truthful and deceptive interactions** in everyday contexts, as reported in adolescents' daily diaries. We were interested in how embedded lies occur in adolescents' daily communication; thus, we hypothesized that, similarly to other preliminary findings from adult populations (Cacuci et al., 2026; *under review*, 2026), most of the lies told would be a mixture of truthful and deceptive information (*H1 exploratory*). In line with previous research linking lying frequency to relational closeness (Afzal et al., 2026), we hypothesized that people would tell more lies to close others (i.e., parents, best friends, partners) (*H2 confirmatory*). Regarding the communication medium, we explored potential differences in the number of reported lies told face-to-face versus through interposed media (*H2 exploratory*). Furthermore, regarding motivation, because several studies have indicated that people lie more often for self-oriented purposes (Cantarero et al., 2018), we expected to replicate the finding that most lies would be told for one's own benefit rather than for others' benefit (*H3 confirmatory*). In line with previous research (Cacuci et al., 2026, *under review*, 2026; Serota, 2024), we expected most of the reported lies to be unplanned (*H4 confirmatory*), to be considered credible (*H5 confirmatory*), and for there to be a positive association between the degree of planning and the perceived seriousness of the consequences (*H6 confirmatory*).

The second aim was to extend the current literature on **individual characteristics** related to deceptive behaviors in adolescents. The study also explored the relationship between the Light Triad and lying. To date, preliminary data from an adult sample (Makowski et al., 2023) found no significant association between the self-reported frequency or ability to lie and light personality

traits. We explored the relationship between the Light Triad, *callous-unemotional* traits, and lying frequency in adolescence (*H3 exploratory*). Finally, building on previous research, we predicted that boys would show greater acceptance of lying than girls (*H7 confirmatory*) and that they would also report more pronounced *callous-unemotional* traits (*H8 confirmatory*).

3.4.3. Method

Participants

We received parental consent to enroll 105 participants in the study. However, we excluded 2 participants because they provided incomplete reports for more than 3 days. The final sample comprised 66 girls and 37 boys, aged 15-18 years ($M_{age} = 16.41$, $SD_{age} = 0.63$). Of the remaining 103 participants, 87 reported Romanian nationality, 15 reported Ukrainian nationality, and 1 reported Italian nationality.

Measures

Participants completed a preliminary set of questionnaires addressing personality traits, attitudes toward lying, and Impression Management. Specifically, we used the ***Callous-Unemotional Scale*** (Frick, 2004), which includes 3 subscales: Callousness, Unemotionality, and Uncaring. We also included the ***Light Triad Scale*** (Kaufman et al., 2019), which measures Faith in Humanity, Humanism, and Kantianism on 3 subscales. Regarding attitudes toward lying, participants were asked to complete the ***Lying Acceptability Scale-Revised*** (*Lying Acceptability Scale-Revised*, R-LAS, Oliveira & Levine, 2008). Finally, we included the ***Impression Management subscale*** (Lie Scale, *Impression Management-Paulhus Deception Scale*, Paulhus, 1986) to account for potential desirability effects when completing the form.

The ***daily diary*** form used was an adapted version of the *Social Interaction and Deception Form* (DePaulo et al., 1996). This form included questions related to the communication medium (face-to-face or interposed), the number of conversation partners, the type of relationship and the

frequency of interaction with these partners, the perceived benefit of the information for the self and for the other(s), together with several lying-related measures (i.e., degree of deceptiveness, degree of planning, credibility, and perceived seriousness of the consequences if caught lying). Based on preliminary data from the pilot study ($n = 13$ participants), we made several adaptations to the format of the daily diary and the types of questions.

Procedure

After obtaining parental consent for enrollment in this study, participants completed a preliminary set of questionnaires on personality traits and attitudes toward lying. We then asked participants to complete the daily diary form in paper-and-pencil format after school, every day, for 5 consecutive days. After *debriefing*, most participants reported having had difficulty answering the question about the opportunity for interaction (*How often do you interact with this person?*). Thus, we excluded this item from our analyses.

3.4.4. Results and Discussion

Our study showed that, in a Romanian sample of 103 adolescents who reported their daily interactions over a week, most interactions were truthful. Even when they lied, they embedded the deceptive information in an otherwise truthful message. Most lies were told to close others. Most interactions took place face to face, but more lies were told through interposed media. As expected, lies were more self-serving; most involved little planning, except when the stakes of being caught lying were high. Most lies were considered to have been believed by their conversation partners. We found that adolescents with *Callousness* and *Uncaring* traits were more likely to report longer deceptive interactions (>30 min) and to rate truthful interactions as benefiting others. *Faith in Humanity* traits were associated with more lies benefiting others and with more serious lies. Adolescents with *Kantian* traits reported fewer lies in the daily diary, as well as less planning and less serious lies. They were also more likely to interact with close others in truthful interactions.

On the *callous-unemotional* scale, boys scored higher than girls only on the *Unemotional* dimension.

3.5. Study 4. A Daily Diary Study Qualitative of Truthful, Deceptive, and Mixed Interactions⁵

3.5.1. Introduction

Although numerous quantitative studies examine the frequency and self-reported strategies of lying, far less information is available about the qualitative dimensions of these lies. To date, few studies have examined the actual content of these messages (Arcimowicz et al., 2015; Cantarero et al., 2018; DePaulo, 2009; DePaulo et al., 1996; Guthrie & Kunkel, 2013; Martinez et al., 2026). One of the most relevant sources is the daily diary study conducted by DePaulo et al. (1996). Results across different samples showed that, for the most part, people lied about their feelings, actions, plans, and whereabouts. Most lies were self-centered and told as outright lies (i.e., entirely fabricated information) and referred mainly to the sender and to objects or events, followed by references to the recipient of the message and to other people.

Another study (Arcimowicz et al., 2015) provided a nuanced analysis of the **self-related and other-related motives associated with lying, as well as the goals of protecting others and benefiting another person**. Furthermore, Cantarero et al. (2018) derived six types of lies according to the beneficiary of the lie and the motivation to lie. Namely, lies could be self-beneficial, other-beneficial, or Pareto-beneficial, and the motivations were mainly to protect others and benefit them. A similar study examining lying in romantic relationships (Guthrie & Kunkel, 2013) also found context-dependent lying. The results showed that people engaged in deceptive behaviors for relational reasons (to maintain a relationship, to negotiate tensions in relational dynamics, to establish relational control), to manage "face" (their own or their partner's), and to maintain previous lies.

⁵ The content of this subchapter overlaps with the publication **Cacuci, S-A., Masip, J., & Visu-Petra, L. (2026). A Qualitative Study of Truthful, Deceptive, and Mixed Interactions in a Daily Diary Paradigm. *Studia Psychologia-Paedagogia*, LXXI, 1, 145-168. <https://doi.org/10.24193/subbypsyped.2026.1.06>**

More recently, Martinez and colleagues (2026) obtained data from a sample of students who were asked to report the content of the lies told in the previous 24 hours. Their results showed that although participants were predominantly truthful, they still told an average of 1.5 lies per day. The content of their lies varied depending on the people they interacted with. This research also provides insight into the strategies used to lie. Overall, participants resorted to falsifications (outright lies) more often than to half-truths or exaggerations (embedded lies).

The present research aimed to replicate and extend the study by DePaulo et al. (1996) using the daily diary method over two weeks with a Romanian sample. We investigated (a) the content of the information provided and (b) the referent of the message in truthful, deceptive, and mixed interactions. This extensive investigation extends existing research by 1) addressing truthful, deceptive, and mixed interactions, as opposed to focusing exclusively on deceptive interactions (Arcimowicz et al., 2015; Cantarero et al., 2018; Guthrie & Kunkel, 2013), as well as by 2) extending the duration from a minimum of 8 to a maximum of 14 days, compared to previous daily diary studies, which involved a maximum of 7 days (Arcimowicz et al., 2015; DePaulo et al., 1996).

3.5.2. Method

The present study is part of a larger research project on truthful and deceptive communication in everyday contexts. The entire process, from participant recruitment to the completion of the daily diary, took place exclusively online.

Participants

Initially, 40 participants enrolled in the larger study and were asked to complete the daily diary for two weeks. From this initial sample, only 30 participants (27 female, 90%) were included in this qualitative study because they met the minimum completion requirement (at least 7 days). Participants were aged between 19 and 45 years ($Mdn_{age} = 23$, $SD = 6.91$). All participants reported

holding Romanian citizenship and Romanian as their native language. All participants reported having at least a high school diploma, with the majority (83.3%) holding at least a bachelor's degree.

Data Collection and Procedure

Participants were recruited through online advertisements posted on multiple social platforms or through direct outreach. The study was a partial replication and extension of DePaulo et al. (1996). The questionnaire was uploaded to the online platform *Formr* (Arslan et al., 2020; Arslan & Tata, 2026; www.formr.org). We adapted the daily diary structure from the *Social Interaction and Deception Form* (SIDF; DePaulo et al., 1996) and included both quantitative and qualitative measures. A key change from the original study was that, for each reported interaction, we asked participants whether they included truthful and deceptive information. If they answered yes, we asked them to write a brief description of the information provided. Thus, we collected data for 3 situations: completely truthful, completely deceptive, and those that included both truthful and deceptive details (*embedded*).

The Qualitative and Quantitative Daily Diary

The authors of the current study developed the detailed protocol following the *Social Interaction and Deception Form* proposed by DePaulo et al. (1996). It assessed participants' daily interactions and the specific truthful, deceptive, or mixed information they provided. Initially, participants reported the total number of interactions they had during the day. Based on their answer, they completed the corresponding number of questions for each interaction. Participants were asked to describe each type of interaction they had had.

Data Analysis

We used *thematic analysis* (Braun & Clarke, 2006) to assess participants' qualitative reports. The thesis author conducted an initial assessment to identify meaningful patterns and evaluate the

suitability of using the coding system of DePaulo et al. (1996). Our qualitative data were considered suitable for only 2 categories: content and referent. Some information was coded into several subcategories, for both content and referent. Based on these decisions, we created an updated list of criteria, following the definitions provided by DePaulo et al. (1996). To validate this system, we conducted a preliminary ICC analysis on 330 interactions (25% of the total sample), coded by both the author of the thesis and a research assistant trained for this purpose. For the remaining reports, the author of the thesis coded 799 interactions, while the research assistant coded a subset of 176 interactions.

3.5.3. Results and Discussion

Overall, truthful interactions covered a wider range of topics, especially in the truthful accounts given. Participants discussed their feelings, actions, and plans, and provided factual details. All participants reported situations in which they talked about themselves, and also included details about the recipient of the message, objects and events, or other people. For deceptive reports, however, not all participants addressed all the proposed topics. These differences also appeared when participants reported providing exclusively deceptive information or a mixture of truths and lies. For embedded lies, mentions of feelings were recurring; completely deceptive interactions, according to the reports, were more frequently associated with explanations or justifications.

Content

For the most part, *participants mentioned feelings and opinions* regardless of the veracity of the information provided. Although being honest about one's own feelings and opinions is natural, people may manipulate this information for various reasons. Our thematic analysis revealed that participants tried to conceal their true feelings, particularly through embedded lies. 92% of

participants reported details about interactions in which they concealed what they felt or thought, compared to 50% who reported having had completely deceptive interactions.

Similarly, although sharing information about *achievements and knowledge* (or the lack thereof) can reflect genuine pride and accomplishment, it can also involve lying, boasting, or exaggerating one's abilities. This topic was not addressed by all participants (83%) in truthful interactions and even less so in embedded lies (38%) and completely deceptive ones (21%), respectively.

Turning to *plans and actions*, this was not addressed by all participants (50%) when they provided exclusively deceptive information, but more (71%) included it when reporting embedded lies. Participants reported situations in which they mentioned having plans other than their actual ones. These situations also overlapped with minimizing discomfort in certain situations and with avoiding potential confrontations with the conversation partner or projecting a favorable image of oneself.

However, although not all participants (73%) provided *justifications in their truthful accounts, more than half* reported this topic in situations where they were either completely deceptive (64%) or mixed truths and lies (79%). These situations overlap with planning, as several reports included justifications to explain why certain commitments could not be fulfilled.

As with the previous topic, participants did not include information about *people, events, or possessions* in all cases (90%), even in truthful accounts. Fewer than half of the individuals involved in the present study told lies about *actions*, either in completely deceptive interactions or in those that included both lies and truths. These reports were sometimes phrased as compliments. Others were related to situations in which people wanted to protect their image.

Referent

The second category investigated concerned the *information's referent*. As expected, all participants reported having mentioned themselves in both truthful and deceptive interactions. They talked about themselves, how they handled various situations, and what they liked or disliked.

Very few participants (36%) mentioned the *recipient* of the message in completely deceptive interactions, but more (67%) were inclined to do so in embedded lies. A similar pattern emerged when participants mentioned *people who were not present* in the conversation. In contrast, in deceptive interactions, over 70% of participants referenced *objects, activities, or events*.

3.6. Study 5. Romanian Police Officers' Perceptions of Interviewing Strategies, Deception Cues, and Interrogation Suspicion ⁶

3.6.1. Introduction

In Romania, the law explicitly prohibits the use of means involving violence, threats, coercion, or promises to obtain information or a confession (Art. 101, Code of Criminal Procedure, CCP). These regulations are essential for establishing a fair and ethical interviewing framework, while also limiting the risk of false confessions (May et al., 2026; Meissner et al., 2014). Although there are no universally accepted techniques for interviewing witnesses and suspects established in Romania (Dumitrașcu, 2024), the official guide to interviewing in criminal proceedings (Cazan et al., 2020) presents the principles of the *information-gathering approach* (the PEACE model), as well as strategies for building rapport with the suspect.

Although several studies have examined how police officers in different European countries relate to interviewing tactics and their perspectives on cues to deception, Romanian law enforcement officers' perspectives have not yet been formally and systematically assessed. Although other international studies (Brimbal et al., 2024; Schell-Leugers et al., 2026) have indicated widespread support for information-gathering tactics among police officers, the lack of clear information about interrogation strategies in Romania led us not to formulate explicit hypotheses in this regard. Previous research has shown that law enforcement officers' experience and training type were related to a favorable view of intimidation-based strategies (Kassin et al., 2007). Thus, we wanted to explore the role of experience versus that of qualifications in conducting suspect interviews (*Research Question 1*).

⁶ The content of this subchapter overlaps with the manuscript Cacuci, S.A., Visu, G., Prodan, N., Bull, R., & Visu-Petra, L. (2026, *in preparation*). Romanian Police Officers' Attitudes on Interviewing Strategies, Deception Cues, and Interrogation Suspicion (*in preparation; preliminary results*)

Regarding verbal cues to deception, we focused mainly on exploring the perceptions of Romanian law enforcement officers regarding the relevance of several verbal and nonverbal cues in detecting deception (*Research Question 2*).

Regarding interrogation suspicion, we expected to replicate the findings proposed by Masip et al. (2016), which show that police practitioners, regardless of their experience, would have high and similar scores on the *Interrogation Suspicion Scale* (*H1 confirmatory*). We also explored the potential positive relationship between a favorable view of control-oriented tactics and suspicion in interrogation (*H1 exploratory*).

3.6.2. Method

This study represents the pilot stage of an international research project initiated within the *Research in Individual Differences and Legal Psychology* Lab (RIDDLE). At the national level, 134 police officers agreed to take part in the research we are conducting. All collected data were anonymized, and the only demographic information recorded was the participants' gender, department, and rank, as well as a question regarding whether they held judicial police certification (*aviz de poliție judiciară*). More than half of the respondents ($n = 89$, 66.42%) were male, approximately 31% ($n = 42$) were female, and 3 preferred not to say. Participants reported various departments and work units, as well as ranks. Within our sample, 76 (57%) police officers reported holding judicial police certification, 55 (41%) reported not holding it, and 3 participants preferred not to say.

Procedure

The questionnaire was made available through a Google form sent to Romanian Police officers interested in joining the study. We administered an adapted version of Strömwall and Granhag's (2003) questionnaire on cues to deception. The first section (A) aimed to assess the relevance of each proposed cue (0 = *Not at all important*, 7 = *Very important*). If an answer other

than 0 was selected, the item from section B appeared. These items addressed the specific perception of each cue. Regarding the specific cues included, we retained the original item on the relevance of *verbal versus nonverbal cues*, but adapted the items on *consistency* and *contradictions*. We also retained 3 items referring to nonverbal cues (*gaze, body movements, tone*) and added *response latency*. Of the 10 items referring to verbal content (*amount of detail; contradictions; use of excuses; use of negations; references to negative emotions, repeating the question asked; length of the statement, failure to recall central details; references to anger, tension, agitation; recalling events in chronological order and references to verifiable information*), only the amount of detail was retained.

To assess interrogation tactics, we used the questionnaire proposed by Cleary and Bull (2019). The factors targeted referred to the dimensions of *Dominance/Control, Empathy/Perspective-taking, Humanity/Integrity*, and *Rapport*, respectively.

We used the *Interrogation Suspicion Scale* (Masip et al., 2016) to measure the lie bias. Participants rated each of the 11 items on a 7-point Likert scale (1 = *Strongly disagree*, 7 = *Strongly agree*)

Finally, to account for a potential social desirability bias, we included a questionnaire measuring Impression Management, through 10 items from the *Zuckerman-Kuhlman Personality Questionnaire* (ZKPQ, 2008).

3.6.3. Results and Discussion

This pilot study aimed to be a first step in understanding Romanian law enforcement officers' perspectives on interviewing tactics, their views on verbal and nonverbal cues, and interrogation suspicion. Preliminary findings showed no significant differences between officers with and without judicial police certification, nor between experience levels, regarding interrogation tactics and cues to deception. However, we replicated the results of Masip and

colleagues (2016), who also found similarly high levels of suspicion in interrogation, regardless of professional experience. We also identified a positive association between suspicion in interrogation and a favorable view of dominance- and control-based tactics among police officers with judicial police certification.

Because most previous research has been conducted in Western Europe and the United States of America, we could not make clear initial assumptions about Romanian law enforcement officers' attitudes toward interrogation strategies. Overall, the findings show that, regardless of whether they had undergone formal training to obtain judicial police certification or of their seniority, they rated *Humanity/Integrity*-based tactics most favorably, followed by *Empathy/Perspective-taking* tactics and *Dominance/Control* tactics. *Rapport-Building* tactics were rated least favorably. A more comprehensive set of questions could provide a more nuanced understanding of how Romanian law enforcement officers relate to this type of tactic.

Second, we sought to establish Romanian police forces' perspective on verbal and nonverbal cues to deception. Although previous studies have shown a preference for nonverbal cues among law enforcement officers (e.g., Bogaard et al., 2016; Strömwall & Granhag, 2003), participants in the pilot study reported similar levels of relevance for both verbal and nonverbal cues. The recurring discussion about the validity of these cues may have influenced their decision, but, rather than reducing the focus on nonverbal cues, they now also seem to take verbal cues into consideration.

Finally, regarding interrogation suspicion, we found that police officers show similar levels of this personality trait, regardless of experience level, replicating the findings of Masip et al. (2016). A relevant result is that this trait correlates positively with support for *Dominance/Control* tactics. This result could be explained by the stereotype that a more controlling interrogation

strategy may discourage a suspect from attempting to lie or, at least, make them less willing to do so.

3.7. Study 6A. Detecting Deception Using a Temporal Segmentation Technique in Remote versus Face-to-Face Interviewing⁷

3.7.1. Introduction

Investigative (or information-gathering) interviews aim to obtain reliable, detailed accounts and rely on open-ended questions and an ethical, neutral attitude from the interviewer (Kelly et al., 2013; May et al., 2026). Truthful individuals are generally considered to be more forthcoming, providing detailed accounts, whereas deceptive individuals tend to keep their accounts short and concise (Hartwig et al., 2007; Leins et al., 2013). Despite this, deceptive individuals may sometimes present seemingly detailed accounts, particularly when they focus on peripheral aspects of the story.

There is an emerging line of research focused on the remote interviewing of child witnesses (for an overview, see Brown et al., 2021), similar to the case of the adult population (Hoogesteyn et al., 2023; Nash et al., 2014; Shahvaroughi et al., 2022), as well as promising indirect findings distinguishing between truthful and deceptive statements in face-to-face and online contexts (Porter et al., 2020; Porter et al., 2023). The present study aims to explore the potential differences between interviewing suspects face to face and remotely, while also examining the effectiveness of temporal segmentation, an emerging information-elicitation technique, with the aim of facilitating the provision of detailed accounts.

3.7.2. The Present Study

Given that there are few data on how suspects provide statements in remote interviewing contexts, the present study sought to examine how truthful and deceptive individuals differ across interview contexts (face-to-face versus remote) in terms of the amount of detail provided during a

⁷ The content of this subchapter overlaps with the manuscript Cacuci, S-A., Porter, C.N., Zloteanu, M., Masip, J., Visu, G., Dan, B-M & Visu-Petra, L. (2026, *in preparation, preliminary results*) Detecting Deception Using Temporal Segmentation in Remote Versus In-Person Interviewing.

mock suspect interview. We also explored the role of the temporal segmentation strategy, compared to the free recall strategy, in providing detailed accounts and in highlighting cues associated with deception. The following hypotheses were formulated.

Hypothesis 1 (Confirmatory): We predict that truth-tellers will report more overall details in the free-recall sequence than lie-tellers.

Hypothesis 2 (Exploratory): We predict that truth-tellers will report more overall details in the temporal segmentation sequence than lie-tellers.

Hypothesis 3 (Exploratory): The temporal segmentation phase will improve the overall detail reports in truth-tellers.

Hypothesis 4 (Exploratory): The temporal segmentation phase will improve the rate of detailedness in truth-tellers.

3.7.3. Method

We recruited participants through online advertisements, student groups, and direct invitations during classes at the Faculty of Psychology and Educational Sciences, Babeş-Bolyai University. The initial sample included 226 participants, but we excluded 3 participants who, during the interview, provided information from a third-person perspective (>7 references). The final sample consisted of 223 participants (195 female, 87.44%, and 28 male, 12.56%) aged between 18 and 50 years ($Mdn_{age} = 21.00$, $SD = 7.80$). Most participants reported Romanian nationality (98.65%); two were Hungarian, and one was French. Romanian was the most frequently reported native language (98.65%), and three participants reported Hungarian as their native language. More than half of the participants (57.40%) held a high school diploma, 31.84% a bachelor's degree, and 10.76% held at least a master's degree

Stimulus Material

A video clip used as a stimulus was developed in the *Research in Individual Differences and Legal Psychology Lab (RIDDLE)*, following a mock-crime scenario.

Procedure

Initial instructions

In the face-to-face condition, interviews took place in a room at the Institute of Psychology in Cluj-Napoca, whereas remote interviews were conducted via MS Teams. When participants arrived for the face-to-face interview, a research assistant greeted them and instructed them to watch a mock crime theft recording from the perpetrator's perspective, explaining that the subsequent interview would be based on the events in the video. Those in the truth condition were told to confess what had happened and to recall everything as it happened. Those in the deception condition were told that it was important to conceal what had happened. Participants in both conditions were told that the interviewer had not been informed about what had actually happened.

The Interview

The interview followed the same structure for all participants: *a free recall phase*, in which participants were encouraged to report everything that had happened in as much detail as possible, followed by *a temporal segmentation phase* with 5 standard questions about specific moments in the video. Immediately after the interview, participants completed a set of online questionnaires. After completing the form, participants were thanked and informed about the second memory test, which was administered through an online form one week after the interview. In addition, participants were asked to rate, on a 5-point Likert scale (1 = *Not at all*, 5 = *Very much*), the extent to which they identified with the perpetrator. In the remote condition, the experiment followed a similar structure to the face-to-face condition, except that during the initial instructions, the research assistant sent participants a personalized link to the recorded material and asked them to watch it online.

Coding

All recorded interviews were transcribed; the transcripts were assessed for accuracy, and two independent raters subsequently coded the data. The first category of details was adapted from

the RM technique (Johnson & Raye, 1981): (a) perceptual details, (b) spatial details, and (c) temporal details.

The second category of details is derived from CBCA (Undeutsch, 1989): (a) contextual embedding, (b) details about interactions, (c) unusual/superfluous details. These make up the Overall Detail Scale, rated on a 5-point Likert scale (*1 = Not detailed, 5 = Very detailed*) (training guide provided by Porter, 2026). Both coding categories were used to independently assess the free recall and temporal segmentation sections.

3.7.4. Results and Discussion

The present study provided preliminary evidence that truth-tellers included more details than those assigned to the deception condition in both interview contexts (face-to-face and remote). It also showed that during the temporal segmentation phase, truth-tellers included more details than lie-tellers.

As expected, our results are consistent with previous research on verbal cues to deception, showing that truthful individuals are generally more detailed than deceptive ones (e.g., DePaulo et al., 2003; Hauch et al., 2015). These findings also find support in the veracity-assessment literature, as the selected CBCA and RM criteria distinguished between truthful and deceptive individuals (Amado et al., 2016; Gancedo Fernández et al., 2021; Hauch et al., 2017).

Our study provides an initial insight into how interviews with adult suspects can be conducted in both face-to-face and remote contexts. We found that, in both contexts, truthful individuals were equally detailed.

Regarding the relevance of the temporal segmentation phase, our results replicate those of Deeb et al., (2025), who found that a Segmented Interview model elicited more details than a standard Structured Interview.

3.8. Study 6B. Strategies for Deception in an Interview Context and Their Relationship to Personality Traits⁸

3.8.1. Introduction

Strategies Used to Lie

The literature on the strategies used to lie is heterogeneous, with numerous categories proposed for their classification (Gupta & Ortony, 2018). In psychological research, lies are generally classified into one of the following categories: *outright lies*, *exaggerations* (or distortions), *embedded lies*, and *omissions* (or subtle lies) (Leal et al., 2020). For the purposes of the present study, one final category is relevant: *denial*. Most research on lying strategies asks participants to explicitly state which strategies they used. However, in real life, direct, real-time feedback about the strategies used by someone who is lying is unlikely; instead, the interlocutor relies on contextual cues to determine whether the information is truthful (Masip & Herrero, 2015).

Personality and the Strategies Used to Lie

Numerous studies link personality traits (mainly dark or aversive traits) to antisocial deceptive behaviors, highlighting a tendency to lie to achieve selfish goals, even at the expense of others' well-being (for an overview, see Muris et al., 2017; Turi et al., 2022). Although most of these studies focus on the increased frequency of lying or on the (perceived) ability to produce and detect lies, they do not explicitly address the specific strategies used by someone seeking to mislead their interlocutor. An emerging area of research focuses on light traits, moving beyond the approach centered on aversive personality traits. These traits are associated with greater openness to authentic and meaningful relationships. *Faith in Humanity* reflects the tendency to see others as good and trustworthy; Humanism reflects the belief that others deserve care and respect; whereas Kantianism supports the attitude that those around us are valuable in themselves, rather than as

⁸ The content of this subchapter overlaps with the manuscript Cacuci, S-A., Porter, C.N., Zloteanu, M., Masip, J., Visu, G., Dan, B-M & Visu-Petra, L. (2026, *in preparation, preliminary results*) Dark and Light Personality Traits and Deception Strategies in Interview Context.

means for achieving one's own goals (Kaufman et al., 2019). Thus, these traits could encourage authentic and direct communication and a lower engagement in deceptive behaviors.

3.8.2. The Present Study

Given the limited amount of research on this topic, we explored whether personality traits (dark and light) influence how participants use different lying strategies during a mock investigative interview.

Specifically, we expected participants with higher levels of dark traits to use more lying strategies during the interview (*H1 exploratory*).

At the same time, we assumed that participants with lower levels of dark traits would use fewer such strategies during the interview (*H2 exploratory*).

This study examined the verbal content derived from the interviews collected in Study 6A from 112 participants assigned to the deception condition. The sample included 95 women (84.82%) and 17 men (15.18%) participants aged between 18 and 49 years ($Mdn_{age} = 20.00$, $SD = 6.91$). Most participants (63.39%) reported having graduated from high school, whereas the rest (36.61%) reported holding at least a master's degree. Almost all participants (111) were Romanian citizens, with only one participant reporting French citizenship. All participants reported Romanian as their native language.

Coding

A coding manual was developed to capture the four broad categories of lying strategies identified in the audio-recorded and transcribed interviews. Each strategy was coded as present (1) or absent (0) during the free recall and the temporal segmentation section, respectively. *Fabrication of information* involved situations in which participants provided completely invented details. *Denial* was coded as present if participants explicitly denied that anything had happened (e.g., "*I never took it*", "*That's a lie!*"). If the information provided was very ambiguous and the

interviewee provided very few details about the central event (the stolen laptop), then the section was coded as *vague*. We identified a few other strategies, but they occurred less frequently than the first three categories. We therefore created a separate section for these sub-strategies.

Two raters were trained using the coding manual and independently coded an initial set of 23 interviews (20% of the total of 112 interviews). All discrepancies were discussed and complete agreement (ICC = 1.00) was reached for all 4 categories. For the remaining statements, one rater coded 59 interviews, while the other rated the remaining 30.

Personality measures

We used the short form of the *Dark Factor Inventory* (DFI; Moshagen et al., 2020). The 35 items assess the common characteristics (the dark core) of narcissism, psychopathy, Machiavellianism, sadism, spitefulness, frustraalia, crudelia, psychological entitlement, moral disengagement, greed, and egoism. Participants are asked to rate their level of (dis)agreement with each item (1 = *Strongly disagree*, 5 = *Strongly agree*). The short version only allows the calculation of a total score.

The Light Triad Scale (LTS; Kaufman et al., 2019) consists of 12 items assessing Faith in Humanity, Humanism, and Kantianism. Participants were asked to rate their level of agreement or disagreement with each item (1 = *Strongly disagree*, 5 = *Strongly agree*).

3.8.3. Results and Discussion

Because the link between personality traits and lying strategies is an emerging area of research, this study examined whether dark and light personality traits influence the use of lying strategies in a mock investigative interview. The binomial models revealed no effect of either dark or light personality traits on the diversity of the strategies used.

Most previous studies explicitly asked participants to describe the strategies they planned to use or had used during mock interviews (Vrij et al., 2012; Vrij et al., 2020). In the present study,

we attempted to independently catalog these strategies, without asking participants about this aspect. Although this approach replicates real-life situations in which no explicit feedback is provided regarding the accuracy of the assessment, it also depends on the rater's perception of the strategy that might have been used. Another limitation of this study was the relatively small sample size ($n = 112$). This is relevant, especially when targeting diverse populations and attempting to capture significant effects of personality traits (Hampejs et al., 2025).

Finally, although personality traits may be associated with more diverse lying strategies, particularly given the increased frequency of lying among individuals with dark traits (Turi et al., 2022), strategies may also depend on context. Future research may also consider the role of interaction context when examining the relationship between personality traits and strategies.

3.9. Study 7. A Theoretical Review of the Cross-Cultural Perspective on Criteria-Based Content Analysis⁹

3.9.1. Introduction

Child sexual abuse (CSA) is considered a complex phenomenon, and the general associated risk factors include cultural ones (Guerra et al., 2021). Cultural values are internalized from a very early age, shaping subsequent perceptions of and interactions with the world. In addition, increasing international mobility involves transitions from one country to another, and cultural norms and values are transferred, often differing significantly from those encountered in the new country. This aspect has important implications for CSA. Such issues raise a variety of challenges for the victim, as well as for the professionals involved. A key question is whether the techniques developed largely "in the West" and usually designed to help distinguish between children's "truthful" and "deceptive" accounts are equally effective in other parts of the world, in various cross-cultural contexts (Bull, 2019). There is a relatively limited, but growing, number of studies investigating the disclosure of child sexual abuse from a cross-cultural perspective (Baker & Dwairy, 2003; Fontes & Plummer, 2010).

General Aspects

Statement Validity Assessment (SVA), first used in the early 1950s (in a less systematic manner) by criminal courts in Sweden and Germany, is currently the most popular procedure used to assess the veracity of verbal content, particularly in the testimonies of alleged victims of this type of abuse (Vrij, 2008).

Undeutsch (1989) proposed an initial systematic list of criteria (the "*credibility criteria*"), which was subsequently revised into a comprehensive version called "*Criteria-Based Content*

⁹ This subchapter overlaps with the publication **Cacuci, S.-A., Bull, R., Huang, C.-Y. & Visu-Petra, L.*** (2021). Criteria-Based Content Analysis in child sexual abuse cases: A cross-cultural perspective, *Child Abuse Review*, <https://doi.org/10.1002/car.2733>.

Analysis" (CBCA) by Steller and Köhnken (1989). A genuine personal experience is assumed to meet several of the CBCA criteria; however, the absence of criteria does not immediately indicate that a statement is fabricated (Oberlader et al., 2016). Currently, SVA assessments are accepted as evidence in courts in several European countries, including Germany, Sweden, and the Netherlands (see Amado et al., 2015; Vrij, 2008).

SVA follows four steps: (1) analysis of the case file; (2) a semi-structured interview; (3) the CBCA protocol/criteria; and (4) evaluation of the CBCA outcome. The criteria of the CBCA protocol are divided into four categories: general characteristics, specific contents, motivation-related contents, and offense-specific elements. The general characteristics category (criteria 1-3) assesses the statement globally. The specific contents category (criteria 4-13) focuses on certain parts of the statement to identify those elements that circumscribe the incident. The motivation-related contents category (criteria 14-18) examines the manner in which the statement is given and the underlying motivation. Finally, the offense-specific elements category (criterion 19) involves information specific to certain types of offenses, known only to experts in the field and to those who have actually experienced the event. Regarding limitations, CBCA scoring is considered to rely on relatively subjective decisions, since, apart from some general guidelines, it is left to the rater's discretion whether or not a given criterion appears in the statement.

An important issue regarding SVA is its possible cultural vulnerability (Davies, 1994). CBCA was developed, and the relevant research was conducted, mainly in European and North American sociocultural contexts (Davies, 1994; Godoy-Cervera & Higuera, 2005). However, its effectiveness in countries that vary in terms of cultural values and norms has not been systematically documented. There appears to be only a single published study (Ruby & Brigham,

1998) addressing this topic, which found that, in the United States of America, depending on the ethnic group investigated, some CBCA criteria were better predictors of credibility than others.

3.9.2. Current Challenges

The current lack of systematic knowledge about how such a widely used method may vary according to cultural and ethnic factors is concerning. The present analysis addresses this gap, bringing together various notions about how cultural norms and beliefs might influence the veracity of children's reports of sexual abuse analyzed using CBCA. Given the lack of research in the field, the ideas proposed are exploratory and are intended to stimulate future research. Aspects related to children's cognitive and socio-emotional development are discussed in relation to aspects concerning social dynamics in cross-cultural research.

3.9.3. Recommendations for Future Research and CBCA Practice from a Cross-Cultural Perspective

Our first recommendation for future research is to assess whether CBCA requires adaptation to various cultural contexts. Most countries where SVA is used have a Western European culture, but migration trajectories within this continent alone provide a strong reason to adopt an approach that accounts for cultural factors. It cannot be ignored that cultural variation may exist even within a single country.

A second recommendation for future research is an empirical assessment of how many cultural factors could influence children's narratives in relation to the CBCA criteria. Children's narratives, particularly autobiographical memories, are indeed influenced by their cultural or ethnic context (Wang et al., 2017). However, the absence of certain CBCA criteria does not necessarily mean that a statement does not reflect a real experience (Oberlader et al., 2016). Children might not include certain criteria not because they lack the necessary knowledge, nor because they are lying, but

simply because they are not used to reporting or describing certain aspects that others might consider relevant or necessary for meeting that criterion. When assessing children's disclosures, professionals must consider as many possible reasons as they can for why a child did not provide a detailed and comprehensive statement, including the child's cultural context. Future studies should empirically assess the influence of cultural and ethnic dimensions on the provision of genuine statements, according to CBCA.

Our third recommendation concerns the importance of awareness of the cultural factor in practice. However, it is equally important to acknowledge that sometimes our attempts to be more "sensitive to cultural differences" can inadvertently lead to less desirable outcomes, such as biases and stereotypes (Fontes & Plummer, 2010; Huang & Bull, 2020). Since CBCA relies heavily on the information provided by the child, it is important to improve the current approach and the expertise required for administering CBCA assessments, as well as interviewers' skills, since the statement provided by a child will be strongly influenced by the interviewer's abilities.

Furthermore, as noted by Sporer and colleagues (2021), CBCA should not be seen as a trivial and readily accessible "tool" for distinguishing lies from the truth. It requires a constellation of thoroughly developed and practiced skills, as well as practical knowledge exercised in productive and counterproductive interviewing (Hirn Mueller et al., 2015). Another aspect that should be included in the training of specialists is the potential impact of the interviewer's language on children's behavior and on the narrative provided in investigative interviews.

Thus, future research should investigate how professionals can effectively learn more about children's cultural differences and the dynamics between them and the members of their family or community, as well as how professionals can monitor their own expectations and biases, along with their ability to manage these situations (Fontes & Plummer, 2010; Huang & Bull, 2020).

Finally, more empirical research in applied contexts is essential for developing and validating culturally sensitive practices and policies.

CHAPTER 4. GENERAL CONCLUSIONS AND DISCUSSIONS

One of the main objectives of the present thesis was to investigate **how individual differences and contextual factors relate to deceptive verbal content**. Specifically, the thesis explored how people communicate in their daily lives, analyzing both truthful and deceptive interactions. After reviewing the literature on embedded lies, the daily diary studies included a measure of the degree of deceptiveness, explicitly designed to capture the extent of lying in everyday lies. We also assessed the qualitative dimensions of the truthful, deceptive, and embedded lies that occur in daily contexts. Another area we sought to explore was the interaction between **individual factors** (personality traits, attitudes toward lying, and pragmatic goals), the **communication medium** (face-to-face or interposed), and **interpersonal characteristics** (relational closeness, frequency of interaction) with the degree of planning, credibility, and consequences in two distinct populations (adults and adolescents).

For the second part of the research, we focused on the interviewing environment and explored **the perspective of Romanian law enforcement officers on interrogation strategies and cues to deception**, while also taking into account **interrogation suspicion** when conducting suspect interviews. Another important contribution of the thesis was the assessment of the **effectiveness of a temporal segmentation-based approach** for obtaining detailed accounts during **face-to-face and remote** interviews, using a mock crime scenario. Finally, given the limited amount of research on how children's **cultural and ethnic context** may influence the assessment of the veracity of their accounts, we proposed a **theoretical perspective on the cognitive and motivational factors** derived from the CBCA criteria.

Table 1.*Main Theoretical and Empirical Contributions of the Thesis*

Study	Objective	Main theoretical contributions
<i>Study 1</i>	<i>A scoping review of the literature on deception in forensic investigative research, identifying studies that measure embedded lies.</i>	• Provided an overview of the emerging research on the topic of embedded lies. • Highlights the relevance of a nuanced approach to this strategy.
<i>Study 2A</i>	Examined how truthful and deceptive information coexist in daily interactions, exploring the frequency of lying, communication media, interpersonal characteristics, and pragmatic goals. Credibility, degree of planning, and perceived consequences were also assessed.	• Confirms previous findings that everyday communication is predominantly truthful and that lies tend to be brief, low-stakes, self-serving, and considered credible. • Shows that most everyday lies are embedded and that relatively few situations involve high degrees of deceptiveness, and also that the distribution of truths and lies across face-to-face versus interposed contexts differs from previous findings on the effect of the communication medium.
<i>Study 2B</i>	Explored how dark traits, light traits, and attitudes toward lying relate to deceptive behavior , incorporating measures of deceptive interactions from the daily diary.	• Demonstrates that more pronounced dark traits are associated with a higher frequency of lying and more positive attitudes toward lying, as well as with a contextual view of lying. • Shows that Kantian traits are uniquely associated with more negative attitudes toward lying and a lower level of engagement in deceptive interactions, whereas the perceived ability to lie and dark traits are not directly linked to more convincing or self-serving lies, thus nuancing trait–deception models.
<i>Study 3</i>	This study aimed to investigate daily patterns of deceptive behavior in Romanian adolescents and to explore how dark and light personality	• Provides the first evidence that adolescents frequently embed lies in otherwise truthful messages. Replicates the findings that most lies are directed at close others,

	traits relate to this type of behavior. It also aimed to promote research on embedded lies in adolescents.	often in mediated contexts, which is relevant for understanding online behavior. • Relates Callous-Unemotional and Kantian traits, as well as Faith in Humanity, to specific patterns of lying, extending personality–deception models to adolescents' everyday communication.
<i>Study 4</i>	To partially replicate and extend the coding scheme of DePaulo et al. (1996) for daily deceptive interactions, by addressing both truthful content and embedded lies.	• Truthful interactions cover a wider range of topics than deceptive ones, and the topics addressed differ systematically between truthful, deceptive, and embedded-lie reports. • Proposes that embedded lies are particularly associated with references to feelings, whereas entirely deceptive interactions tend to center on explanations/justifications, refining perspectives on lying and its strategic nature.
<i>Study 5</i>	Exploring the perspectives of Romanian law enforcement officers on interrogation strategies, with a focus on verbal and nonverbal cues and on levels of interrogation suspicion.	• Adds to the literature on the attitudes of Eastern European law enforcement officers, with results indicating broad support for ethical tactics and a perceived usefulness of both verbal and nonverbal cues, independent of interviewing experience. • Replicates previous findings that suspicion does not differ across experience levels and links suspicion in interrogation to more favorable views of dominance-oriented tactics.
<i>Study 6A</i>	Exploring how the interviewing medium (face-to-face versus remote) relates to suspects' accounts, while also including a temporal segmentation phase designed to elicit more detailed statements.	• Provides the first direct comparison between truthful and deceptive individuals in face-to-face versus remote suspect interviews, showing that truthful individuals consistently provide more details in both contexts, as

		well as the relevance of temporal segmentation for eliciting detailed statements. • Contributes to emerging research on how a temporal segmentation approach can be a potential strategy for encouraging more detailed accounts.
<i>Study 6B</i>	Explored the potential links between dark and light personality traits and the use of lying strategies in a mock investigative interview.	• Finds that there is no clear effect of dark or light traits on the diversity of lying strategies, which may indicate that situational and task-related constraints may be more relevant than trait influences in this context. • Provides theoretical explanations and future directions, framing personality–strategy relationships as more complex, in line with the assumptions of COLD (Markowitz & Hancock, 2019).
<i>Study 7</i>	Providing a theoretical overview of the potential influence of culture and ethnic context on Criteria-Based Content Analysis	• Extends previous theoretical assumptions that some CBCA criteria are more susceptible to cultural variation than others and articulates the possible cultural influences on cognitive and motivational criteria. • Provides a conceptual framework and specific suggestions to be tested empirically, pointing toward a potential future cross-cultural validation of CBCA.

Table 2.
Main Methodological Contributions of the Thesis

Study	Objective	Main methodological contributions
<i>Study 2A</i>	Adapting and applying an extended Social Interaction and Deception Form (SIDF, DePaulo et al., 1996), by	Adapts the SIDF (DePaulo et al., 1996) to include an item assessing the degree of deceptiveness, allowing a

	including an item assessing the degree of deceptiveness, using the daily diary method in an adult sample.	nuanced assessment of adults' daily interactions , along a continuum from truth to lie.
<i>Study 2B</i>	Integrating the Romanian adaptations of the Light Triad Scale (LTS) (Kaufman et al., 2019), the Dark Factor Inventory (DFI, Moshagen et al., 2018), and the Lying Profile Questionnaire (LIE; Makowski et al., 2023) into a combined trait and diary method assessment to evaluate the adult population.	Validated a Light Traits instrument (Light Triad Scale, Kaufman et al., 2019), together with a dispositional lying scale (Ability, Frequency, Negative View, Contextuality) (Makowski et al., 2023), in relation to measures of deceptive communication, with data in the adult population being collected through the daily diary method.
<i>Study 3</i>	Proposing and extending an age-appropriate version of the Social Interaction and Deception Form (SIDF, DePaulo et al., 1996), with assessments of the degree of deceptiveness added to a daily diary for adolescents . Integrating a Romanian adaptation of the Light Triad Scale (LTS, Kaufman et al., 2019)	Adapts the SIDF (DePaulo et al., 1996) to be adolescent-specific and to include a measure of embedded interactions, in a population in which validated instruments measuring daily deceptive interactions are scarce . In addition, adapting the Light Triad Scale (Kaufman et al., 2019) for an adolescent sample and comparing it with a measure of Callous-Unemotional traits (CUS, Frick, 2004).
<i>Study 5</i>	Piloting an instrument for assessing perspectives on interrogation strategies (Cleary & Bull, 2019) among law enforcement officers and adapting a questionnaire on cues to deception (Strömwall & Granhag, 2003) for Romanian law enforcement officers.	Translating and adapting Cleary & Bull's (2019) questionnaire to assess the perspective of law enforcement officers on interrogation strategies and extending the instrument proposed by Strömwall & Granhag (2003) on attitudes toward cues to deception by introducing additional verbal cues. Preliminary results helped identify the items

		requiring refinement for the next part of the project.
<i>Study 6A</i>	Adapting and validating a temporal segmentation strategy derived from the NICHD (Lamb et al., 2008; Lamb et al., 2011) for a mock suspect interview, in both face-to-face and remote interview formats.	Adapting and implementing a promising temporal segmentation strategy, beyond its use in child witness contexts. Collecting preliminary data on the strategy's usefulness for eliciting detailed statements in investigative interviews with adult suspects.
<i>Study 6B</i>	Integrating the Romanian adaptation of the Light Triad (LTS, Kaufman et al., 2019) and comparing it with the Dark Factor Inventory (DFI, Moshagen et al., 2018) in a mock interviewing context.	Further testing of the Light Triad Scale (Kaufman et al., 2019) in the context of suspect interviewing.

4.1. Limitations and Future Research Directions

Alongside the contributions, it is necessary to mention a few limitations of the thesis, in the hope that future research will make note of them. First, we must consider the extent to which our findings can be generalized. Several of the studies included in the thesis (**Studies 2A and B, Study 4, Studies 6A and B**) were conducted on student samples. In addition, in **Studies 6A and B**, most participants were female. Thus, future research should aim for a more balanced sample.

Second, most of the studies, particularly those that included the daily diary method, relied on self-report measures. For the adolescent sample and the sample that included law enforcement practitioners, we included a scale to assess potential social desirability effects, but additional objective measures are needed to account for potentially distorted responses. Given the distribution of dark and light traits in the general population, larger samples would be needed,

including a balanced representation of low, medium, and high levels of these traits (Moshagen et al., 2018; Turi et al., 2025).

Third, the law enforcement officers in **Study 5** completed an adapted scale (Strömwall & Granhag, 2003) on the perception of verbal and nonverbal cues to deception. However, further research is needed to assess in greater depth how practitioners evaluate these cues.

Fourth, regarding the investigative interview, we mentioned that all participants went through the same sequence of interview phases (free recall, then temporal segmentation). Since we could not assess an independent effect of temporal segmentation, we cannot rule out that other factors influenced participants' responses (e.g., they became familiar with the interviewer). Therefore, future research should implement a counterbalanced task order.

Fifth, it is important to acknowledge that watching a video of a mock crime, compared to actually engaging in a mock activity, may lead to differences in the quality of the account provided (Vrij & Granhag, 2012). Future studies could use a mock activity, followed by face-to-face or online interviews. In scenarios similar to real life, where interviews rarely occur immediately after the offense, this would allow a more nuanced perspective on the effects of memory decay and information elicitation (Jupe et al., 2020).

Finally, to assess the lying strategies evaluated in the interviews, it would be advisable to include a subjective report alongside the independent coding of strategies identified by the researcher. This could allow the inclusion of more categories of strategies and a nuanced comparative analysis.

REFERENCES

- Afzal, T., Dykstra, V. W., O'Connor, A. M., & Evans, A. D. (2026). I think they believed me: examining the perceived believability of lies across age and relationship closeness. *Self and Identity*, 25(4), 509–523. <https://doi.org/10.1080/15298868.2026.2652848>
- Amado, B.G., Arce, R. & Fariña, F. (2015) Undeutsch hypothesis and criteria based content analysis: A meta-analytic review. *The European Journal of Psychology Applied to Legal Context*, 7(1), 3–12. <https://doi.org/10.1016/j.ejpal.2014.11.002>
- Amado, B. G., Arce, R., Farina, F., & Vilarino, M. (2016). Criteria-Based Content Analysis (CBCA) reality criteria in adults: A meta-analytic review. *International Journal of Clinical and Health Psychology*, 16(2), 201-210. <https://doi.org/10.1016/j.ijchp.2016.01.002>
- Applegate, J. L., & Delia, J. G. (1980). Person-centered speech, psychological development, and the contexts of language usage. In R.S. Clair & H. Giles (Eds.). *The social and psychological contexts of language* (pp. 245-282). Psychology Press.
- Arcimowicz, B., Cantarero, K., & Soroko, E. (2015). Motivation and consequences of lying. A qualitative analysis of everyday lying. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 16 (3).
- Arslan, R. C., Walther, M. P., & Tata, C. S. (2020). formr: A study framework allowing for automated feedback generation and complex longitudinal experience-sampling studies using R. *Behavior Research Methods*, 52, 376–387. <https://doi.org/10.3758/s13428-019-01236-y>

- Arslan, R.C., & Tata, C.S. (2026). *formr*: A study framework allowing for automated feedback generation and complex longitudinal experience sampling studies using R. (version v0.22.0).
- Baker, K.A. & Dwairy, M. (2003) Cultural norms versus state law in treating incest: A suggested model for Arab families. *Child Abuse & Neglect*, 27(1), 109–123. [https://doi.org/10.1016/S0145-2134\(02\)00505-7](https://doi.org/10.1016/S0145-2134(02)00505-7)
- Bogaard, G., Meijer, E. H., & Vrij, A. (2014). Using an example statement increases information but does not increase accuracy of CBCA, RM, and SCAN. *Journal of Investigative Psychology and Offender Profiling*, 11, 151–163. <https://doi.org/10.1002/jip.1409>
- Bogaard G, Meijer EH, Vrij A, Merckelbach H (2016). Strong, but Wrong: Lay People's and Police Officers' Beliefs about Verbal and Nonverbal Cues to Deception. *PLOS ONE* 11(6): e0156615. <https://doi.org/10.1371/journal.pone.0156615>
- Bond, C. F., & DePaulo, B. M. (2006). Accuracy of deception judgments. *Personality and Social Psychology Review*, 10(3), 214-234. https://doi.org/10.1207/s15327957pspr1003_2
- Boskovic, I., Gallardo, C. T., Vrij, A., Hope, L., & Merckelbach, H. (2019). Verifiability on the run: an experimental study on the verifiability approach to malingered symptoms. *Psychiatry, Psychology and Law*, 26(1), 65–76. <https://doi.org/10.1080/13218719.2018.1483272>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brimbal, L., Roche, S. P., & Martaindale, M. H. (2024). Interviewing and interrogation practices and beliefs, 20 years later: A national self-report survey of American police. *Law and Human Behavior*, 48(4), 247–261. <https://doi.org/10.1037/lhb0000570>

- Brown, D., Walker, D., & Godden, E. (2021). Tele-forensic interviewing to elicit children's evidence—Benefits, risks, and practical considerations. *Psychology, Public Policy, and Law*, 27(1), 17–29. <https://doi.org/10.1037/law0000288>
- Bull, R. (2019). Credible accounts: What they are and how to obtain them. *Linguistics and the Human Sciences*, 12(2–3), 166–176. <https://doi.org/10.1558/lhs.36990>
- Buta, M., Visu-Petra, G., Visu-Petra, L. (2020). A little lie never hurt anyone: Attitudes toward various types of lies over the lifespan. *Psychology in Russia: State of the art*, 13(1), 70-81
- Buta, M., Visu-Petra, G., Opre, A., Koller, S., & Visu-Petra, L. (2022). Individual predictors of lie acceptability across development. *European Journal of Developmental Psychology*, 19(5), 696-710. <https://doi.org/10.1080/17405629.2021.1947234>
- Cacuci, S-A., & Visu-Petra, L. (2026). A scoping review of the literature on embedded truths and lies in investigative research. *Cognition. Brain. Behavior. An Interdisciplinary Journal*, 30(1), 63-103. <https://doi.org/10.24193/cbb.2026.30.04>
- Cantarero, K., Szarota, P., Stamkou, E., Navas, M., & Dominguez Espinosa, A. del C. (2018a). When is a lie acceptable? Work and private life lying acceptance depends on its beneficiary. *The Journal of Social Psychology*, 158(2), 220–235. <https://doi.org/10.1080/00224545.2017.1327404>
- Cantarero, K., Van Tilburg, W. A., & Szarota, P. (2018b). Differentiating everyday lies: A typology of lies based on beneficiary and motivation. *Personality and Individual Differences*, 134, 252-260. <https://doi.org/10.1016/j.paid.2018.05.013>
- Caso, L., Cavagnis, L., Vrij, A., & Palena, N. (2023). Cues to deception: Can complications, common knowledge details, and self-handicapping strategies discriminate between truths,

- embedded lies and outright lies in an Italian-speaking sample? *Frontiers in Psychology*, 14, 1128194. <https://doi.org/10.3389/fpsyg.2023.1128194>
- Cazan, E., Matei, D., Budăi, R., Gavriș R. (2020). *Tactica audierii în procesul penal. Ghid de bune practici.* Editura Măiastra, Târgu Jiu. <https://inm-lex.ro/poca/files/%20Ghid%20tehnici%20audiere%20-%20web-online.pdf>
- Codul de procedură penală* [Code of Criminal Procedure]. Retrieved from <https://www.romaniacurata.ro/documente/CPP.pdf>
- Cleary, H. M. D., & Bull, R. (2019). Jail inmates' perspectives on police interrogation. *Psychology, Crime & Law*, 25(2), 157–170. <https://doi.org/10.1080/1068316X.2018.1503667>
- Davies, G.M. (1994) Statement validity analysis: An art or a science? Commentary on Bradford. *Child Abuse Review*, 3(2), 104–106. <https://doi.org/10.1002/car.2380030208>
- Deeb, H., Vrij, A., Leal, S., Fallon, M., Mann, S., Luther, K., & Granhag, P. A. (2022a). Mapping details to elicit information and cues to deceit: the effects of map richness. *The European Journal of Psychology Applied to Legal Context*, 14(1), 11–19. <https://doi.org/10.5093/ejpalc2022a2>
- Deeb, H., Vrij, A., Leal, S., Mann, S., & Burkhardt, J. (2022b). The model sketch for enhancing lie detection and eliciting information. *Brain Sciences*, 12(9), 1180. <https://doi.org/10.3390/brainsci12091180>
- Deeb, H., Vrij, A., Leal, S., Fallon, M., Mann, S., Luther, K., & Granhag, P. A. (2022c). Sketching routes to elicit information and cues to deceit. *Applied Cognitive Psychology*, 36(5), 1049–1059. <https://doi.org/10.1002/acp.3989>

- Deeb, H., Vrij, A., Severino, M., & Leal, S. (2025). The segmented interview: partitioning the initial free recall topics into segments to enhance information gathering and lie detection. *Behavioral Sciences*, 15(9), 1163. <https://doi.org/10.3390/bs15091163>
- DePaulo, B. M., Kashy, D. A., Kirkendol, S. E., Wyer, M. M., & Epstein, J. A. (1996). Lying in everyday life. *Journal of Personality and Social Psychology*, 70(5), 979–995. <https://doi.org/10.1037/0022-3514.70.5.979>
- DePaulo, B. M., & Kashy, D. A. (1998). Everyday lies in close and casual relationships. *Journal of Personality and Social Psychology*, 74(1), 63–79. <https://doi.org/10.1037/0022-3514.74.1.63>
- DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological bulletin*, 129(1), 74. <https://doi.org/10.1037/0033-2909.129.1.74>
- DePaulo, B. M. (2009). *Behind the door of deceit. Understanding the biggest liars in our lives*. Charleston, SC: DoubleDoor Books.
- Dumitrașcu, I. D. (2024). Classic and modern trends in hearing individuals from the perspective of forensic psychology and good faith. *Conferința Internațională de Drept, Studii Europene și Relații Internaționale*, 12(XII), 317-324.
- Dykstra, V. W., Turchio, V. M., Willoughby, T., & Evans, A. D. (2023). Longitudinal associations between impulsivity and lie-telling in childhood and adolescence. *Developmental Science*, 26, e13370. <https://doi.org/10.1111/desc.13370>
- Dykstra, V. W., Willoughby, T., & Evans, A. D. (2024). Longitudinal associations between lie evaluations and frequency: The moderating role of age. *Developmental Science*, 27(3). <https://doi.org/10.1111/desc.13465>

- Elaad, E. (2019). Self-assessed lie and truth telling abilities: demographic, personality, and behavioral correlates. In T. Docan-Morgan (Ed.), *Handbook of Deceptive Communication*, 445–462. Palgrave: Macmillan. https://doi.org/10.1007/978-3-319-96334-1_23
- Fontes, L.A. & Plummer, C. (2010). Cultural issues in disclosures of child sexual abuse. *Journal of Child Sexual Abuse*, 19(5), 491–518. <https://doi.org/10.1080/10538712.2010.512520>
- Forsyth, L., Anglim, J., March, E., & Bilobrk, B. (2021). Dark Tetrad personality traits and the propensity to lie across multiple contexts. *Personality & Individual Differences*, 177. <https://doi.org/10.1016/j.paid.2021.110792>
- Frick, P. J. (2004). Inventory of Callous–Unemotional traits [Dataset]. In *PsycTESTS Dataset*. <https://doi.org/10.1037/t62639-000>
- Gancedo Fernández, Y., Fariña Rivera, F., Seijo Martínez, D., Vilariño Vázquez, M., & Arce Fernández, R. (2021). Reality monitoring: A meta-analytical review for forensic practice. *European Journal of Psychology Applied to Legal Context*, 99-110. <https://doi.org/10.5093/ejpalc2021a10>
- George, J. F., & Carlson, J. R. (2005). Media selection for deceitful communication. In *Proceedings of the 38th Annual Hawaii International Conference on System Sciences* (pp. 21b-21b). IEEE. <https://doi.org/10.1109/HICSS.2005.407>
- Glätzle-Rützler, D., & Lergetporer, P. (2014). Lying and age: An experimental study. *Journal of Economic Psychology*, 46, 12–25. <https://doi.org/10.1016/j.joep.2014.11.002>
- Godoy-Cervera, V. & Higuera, L. (2005) Criteria-based content analysis (CBCA) in statement credibility assessment. *Papeles del Psicólogo*, 26, 92–98.

- Granhag, P. A., & Hartwig, M. (2014). The strategic use of evidence technique: A conceptual overview. *Detecting deception: Current challenges and cognitive approaches*, 231-251. <https://doi.org/10.1002/9781118510001.ch10>
- Grice, H. P. (1975). Logic and conversation. In P. Cole & J. L. Morgan (Eds.), *Syntax and semantics, Vol. 3: Speech acts* (pp. 41–58). Academic Press.
- Guerra, C., Arredondo, V., Saavedra, C., Pinto-Cortez, C., Benguria, A., & Orrego, A. (2021). Gender differences in the disclosure of sexual abuse in Chilean adolescents. *Child Abuse Review*, 30(3), 210–225. <https://doi.org/10.1002/car.2672>
- Gupta, S., & Ortony, A. (2018). Lying and Deception. In J. Meibauer (Ed.), *The Oxford handbook of lying* (pp. 149–169). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198736578.013.11>
- Guthrie, J., & Kunkel, A. (2013). Tell me sweet (and not-so-sweet) little lies: Deception in romantic relationships. *Communication Studies*, 64(2), 141-157. <https://doi.org/10.1080/10510974.2012.755637>
- Hampejs, V., Zwickl, A. A., Tran, U. S., & Voracek, M. (2025). The Dark Triad of personality and criminal and delinquent behavior: Preregistered systematic review and three-level meta-analysis. *Personality and Individual Differences*, 246, 113308. <https://doi.org/10.1016/j.paid.2025.113308>
- Hancock, J. T., Thom-Santelli, J., & Ritchie, T. (2004). Deception and design: The impact of communication technology on lying behavior. In E. Dykstra-Erickson, and M. Tscheligi (Eds.), *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 129-134). Association for Computing Machinery. <https://doi.org/10.1145/985692.985709>

- Hare, R. D., Forth, A. E., & Hart, S. D. (1989). The psychopath as prototype for pathological lying and deception. In J. C. Yuille (Ed.), *Credibility assessment* (pp. 25-49). Dordrecht: Springer Netherlands.
- Hartwig, M., Anders Granhag, P., & Strömwall, L. A. (2007). Guilty and innocent suspects' strategies during police interrogations. *Psychology, Crime & Law*, 13(2), 213–227. <https://doi.org/10.1080/10683160600750264>
- Hartwig M. and Bond Jr. C. F. (2014). Lie Detection from multiple cues: A meta-analysis, *Applied Cognitive Psychology*, 28, 661–676. <https://doi.org/10.1002/acp.3052>
- Harvey, A. C., Vrij, A., Leal, S., Hope, L., & Mann, S. (2017). Deception and decay: Verbal lie detection as a function of delay and encoding quality. *Journal of Applied Research in Memory and Cognition*, 6(3), 306-318. <https://doi.org/10.1016/j.jarmac.2017.04.002>
- Hauch, V., Blandón-Gitlin, I., Masip, J., & Sporer, S. L. (2015). Are Computers Effective Lie Detectors? A Meta-Analysis of Linguistic Cues to Deception. *Personality and Social Psychology Review*, 19(4), 307-342. <https://doi.org/10.1177/1088868314556539>
- Hauch, V., Sporer, S.L., Masip, J. & Blandón-Gitlin, I. (2017) Can credibility criteria be assessed reliably? A meta-analysis of criteria-based content analysis. *Psychological Assessment*, 29(6), 819. <https://doi.org/10.1037/pas0000426>
- Hidalgo-Fuentes, S., González-Pérez, E., & Martínez-Álvarez, I. (2025). Relationship between online trolling and Dark Tetrad personality traits: A meta-analysis. *Psicothema*, 37(4), 29-41. <http://dx.doi.org/10.70478/psicothema.2025.37.26>
- Hirn Mueller, D., Schreiber Compo, N., Molina, J., Bryon, A. & Pimentel, P.S. (2015) Productive and counterproductive interviewing techniques: Do law enforcement investigators know

- the difference? *Psychology, Public Policy, and Law*, 21(3), 295–308.
<https://doi.org/10.1037/law0000047>
- Hoogesteyn, K., Verigin, B. L., Finnicks, D., & Meijer, E. H. (2023). Rapport-building: Chat versus in-person witness interviews. *Journal of Investigative Psychology and Offender Profiling*, 20(2), 162–178. <https://doi.org/10.1002/jip.1609>
- Huang, C.Y. & Bull, R. (2020) Applying Hierarchy of Expert Performance (HEP) to investigative interview evaluation: strengths, challenges and future directions. *Psychiatry, Psychology and Law*, 28(2), 255–273. <https://doi.org/10.1080/13218719.2020.1770634>
- Huang, J. L., Bowling, N. A., Liu, M., & Li, Y. (2015). Detecting insufficient effort responding with an infrequency scale: Evaluating validity and participant reactions. *Journal of Business and Psychology*, 30(2), 299–311. <https://doi.org/10.1007/s10869-014-9357-6>
- Johnson, M. K., & Raye, C. L. (1981). Reality monitoring. *Psychological review*, 88(1), 67.
- Jonason, P. K., Lyons, M., Baughman, H. M., & Vernon, P. A. (2014). What a tangled web we weave: the dark triad traits and deception. *Personality and Individual Differences*, 70, 117–119. <https://doi.org/10.1016/j.paid.2014.06.038>
- Jones, D. N., & Paulhus, D. L. (2017). Duplicity among the dark triad: Three faces of deceit. *Journal of Personality and Social Psychology*, 113(2), 329–342. <https://doi.org/10.1037/pspp0000139>
- Jupe, L. M., Vrij, A., Leal, S., & Nahari, G. (2020). Fading lies: applying the verifiability approach after a period of delay. *Psychology, Crime & Law*, 26(4), 327–342.
<https://doi.org/10.1080/1068316X.2019.1669594>
- Kashy, D. A., & DePaulo, B. M. (1996). Who lies?. *Journal of Personality and Social Psychology*, 70(5), 1037. <https://doi.org/10.1037/0022-3514.70.5.1037>

- Kassin, S.M., Leo, R.A., Meissner, C.A. *et al.* (2007). Police Interviewing and Interrogation: A Self-Report Survey of Police Practices and Beliefs. *Law Human Behavior* 31, 381–400.
<https://doi.org/10.1007/s10979-006-9073-5>
- Kaufman, S. B., Yaden, D. B., Hyde, E., & Tsukayama, E. (2019). The Light vs. Dark Triad of personality: Contrasting two very different profiles of human nature. *Frontiers in Psychology*, 10, 1-26. <https://doi.org/10.3389/fpsyg.2019.00467>
- Kelly, C. E., Miller, J. C., Redlich, A. D., & Kleinman, S. M. (2013). A taxonomy of interrogation methods. *Psychology, Public Policy, and Law*, 19(2), 165–178.
<https://doi.org/10.1037/a0030310>
- Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: Structured investigative interviews of child victims and witnesses*. Wiley. <https://doi.org/10.1002/9780470773291>
- Lamb, M. E., La Rooy, D. J., Malloy, L. C., & Katz, C. (Eds.). (2011). *Children's testimony: A handbook of psychological research and forensic practice* (2nd ed.). Wiley-Blackwell.
- Leal, S., Vrij, A., Deeb, H., Hudson, C., Capuozzo, P., & Fisher, R. P. (2020). Verbal cues to deceit when lying through omitting information. *Legal and Criminological Psychology*, 25(2), 278-294.
<https://doi.org/10.1111/lcrp.12180>
- Leins, D. A., Fisher, R. P., & Ross, S. J. (2013). Exploring liars' strategies for creating deceptive reports. *Legal and Criminological Psychology*, 18(1), 141–151.
<https://doi.org/10.1111/j.2044-8333.2011.02041.x>
- Levine, T. R., Serota, K. B., Carey, F., & Messer, D. (2013). Teenagers Lie a Lot: A Further Investigation into the Prevalence of Lying. *Communication Research Reports*, 30(3), 211–220. <https://doi.org/10.1080/08824096.2013.806254>

- Levine, T. R. (2014). Truth-Default Theory (TDT). *Journal of Language and Social Psychology*, 33(4), 378–392. <https://doi.org/10.1177/0261927x14535916>
- Levine, T. R. (2019). *Duped: Truth-Default Theory and the Social Science of Lying and Deception*. University Alabama Press.
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Journal of Clinical Epidemiology*, 62(10), e1–e34. <https://doi.org/10.1016/j.jclinepi.2009.06.006>
- Loconte, R., & Kleinberg, B. (2025). Examining embedded lies through computational text analysis. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-11327-w>
- Makowski, D., Pham, T., Lau, Z. J., Raine, A., & Chen, S. A. (2023). The structure of deception: Validation of the Lying Profile Questionnaire. *Current Psychology*, 42(5), 4001-4016. <https://doi.org/10.1007/s12144-021-01760-1>
- Markowitz, D. M., & Hancock, J. T. (2019). Deception and language: The contextual organization of language and deception (COLD) framework. In Docan-Morgan, T. (Ed.) *The Palgrave handbook of deceptive communication* (pp. 193-212). Cham: Springer International Publishing.
- Markowitz, D. M. (2020). The deception faucet: A metaphor to conceptualize deception and its detection. *New Ideas in Psychology*, 59. <https://doi.org/10.1016/j.newideapsych.2020.100816>

- Markowitz, D. M., & Levine, T. R. (2021). It's the Situation and Your Disposition: A Test of Two Honesty Hypotheses. *Social Psychological and Personality Science*. <https://doi.org/10.1177/1948550619898976>
- Markowitz, D. M. (2022). Revisiting the relationship between deception and design: A replication and extension of Hancock et al. (2004). *Human Communication Research*, 48(1), 158-167. <https://doi.org/10.1093/hcr/hqab019>
- Markowitz, D. M., & Hancock, J. T. (2022). Lies and language: A context-contingent approach to verbal cues of deceit. In M. Dehghani & R. L. Boyd (Eds.), *Handbook of language analysis in psychology* (pp. 274–284). Guilford Press.
- Markowitz DM, Hancock JT, Woodworth MT and Ely M (2023). Contextual considerations for deception production and detection in forensic interviews. *Frontiers in Psychology* 14, 1134052. <https://doi.org/10.3389/fpsyg.2023.1134052>
- Markowitz, D. M. (2024). Deconstructing deception: Frequency, communicator characteristics, and linguistic features of embeddedness. *Applied Cognitive Psychology*, 38(3), e4215. <https://doi.org/10.1002/acp.4215>
- Martinez, R. J., Punyanunt-Carter, N. M., Levine, T. R., & Serota, K. B. (2026). Everyday interpersonal deception among college-aged respondents: a directed content analysis. *Qualitative Research Reports in Communication*, 1–13. <https://doi.org/10.1080/17459435.2026.2665612>
- Masip, J., Garrido, E., & Herrero, C. (2004). Defining deception. *Anales de psicología*, 20(1), 147-171.

- Masip, J., Alonso, H., Herrero, C., & Garrido, E. (2016). Experienced and novice officers' generalized communication suspicion and veracity judgments. *Law and Human Behavior*, 40(2), 169–181. <https://doi.org/10.1037/lhb0000169>
- Masip, J., & Herrero, C. (2015). New approaches in deception detection I. Background and theoretical framework. *Papeles del Psicólogo*, 36(2), 83-95.
- May L., Fahsing I., Kelly C.E., Barela S., Milne R., Bull R. (2026). "What is investigative interviewing (and what is it not)? A primer on the ethos of suspect interviewing". *Journal of Criminal Psychology*, 16 (1), 5–21. <https://doi.org/10.1108/JCP-10-2024-0092>
- McCornack, S. A., Levine, T. R., Solowczuk, K. A., Torres, H. I., & Campbell, D. M. (1992). When the alteration of information is viewed as deception: An empirical test of information manipulation theory. *Communication Monographs*, 59(1), 17–29. <https://doi.org/10.1080/03637759209376246>
- McCornack, S. A. (1992). Information manipulation theory. *Communication Monographs*, 59(1), 1–16. <https://doi.org/10.1080/03637759209376245>
- McCornack, S. A., Morrison, K., Paik, J. E., Wisner, A. M., & Zhu, X. (2014). Information Manipulation Theory 2: A propositional theory of deceitful discourse production. *Journal of Language and Social Psychology*, 33(4), 348-377. <https://doi.org/10.1177/0261927X14534656>
- Mcevoy, A. (2021). *Investigating the relationship between lie acceptability and self-reported deceptive behaviour tendencies: Gender and age differences* [Undergraduate Thesis]. National College of Ireland, Dublin.

- Meissner, C. A., Redlich, A. D., Michael, S. W., Evans, J. R., Camilletti, C. R., Bhatt, S., & Brandon, S. (2014). Accusatorial and information-gathering interrogation methods and their effects on true and false confessions: A meta-analytic review. *Journal of Experimental Criminology*, 10, 459–486.
- Meissner, C. A., & Kassin, S. M. (2002). "He's guilty!": Investigator bias in judgments of truth and deception. *Law and Human Behavior*, 26(5), 469–480.
- Moor, L., & Anderson, J. R. (2019). A systematic literature review of the relationship between dark personality traits and antisocial online behaviours. *Personality and Individual Differences*, 144, 40-55. <https://doi.org/10.1016/j.paid.2019.02.027>
- Morrison, K., McCornack, S., Deverell, W. T., Zhu, X., & Temple, S. (2020). Where have all the liars gone? Examining situational complexity and the inclusion of false information within discourse.
- Morrison, K., & McCornack, S. A. (2026). Can we be honest? Cognition, intention, speech production, and the future of deception research. *Journal of Language and Social Psychology*, 45(1), 122-146. <https://doi.org/10.1177/0261927X251364005>
- Moshagen, M., Hilbig, B. E., & Zettler, I. (2018). The Dark Core of personality. *Psychological Review*, 125(5), 656–688. <https://doi.org/10.1037/rev0000111>
- Moshagen, M., Zettler, I., & Hilbig, B. E. (2020). Measuring the Dark Core of Personality. *Psychological Assessment*, 32(2), 182–196. <https://doi.org/10.1037/pas0000778>
- Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on the Dark Triad (narcissism,

- Machiavellianism, and psychopathy). *Perspectives on Psychological Science*, 12(2), 183–204. <https://doi.org/10.1177/1745691616666070>
- Nahari, G., Vrij, A., & Fisher, R. P. (2014a). The Verifiability Approach: Countermeasures Facilitate its Ability to Discriminate Between Truths and Lies. *Applied Cognitive Psychology*, 28(1), 122–128. <https://doi.org/10.1002/acp.2974>
- Nash, R. A., Houston, K. A., Ryan, K., & Woodger, N. (2014). Remembering remotely: Would video-mediation impair witnesses' memory reports? *Psychology, Crime & Law*, 20(8), 756–768. <https://doi.org/10.1080/1068316X.2013.857669>
- Nisin, Z., Nahari, G., & Goldsmith, M. (2022). Lies divorced from context: evidence for Context Embedded Perception (CEP) as a feasible measure for deception detection. *Psychology, Crime & Law*, 30(2), 189–205. <https://doi.org/10.1080/1068316X.2022.2078825>
- Oberlader, V. A., Naefgen, C., Koppehele-Gossel, J., Quinten, L., Banse, R., & Schmidt, A. F. (2016). Validity of content-based techniques to distinguish true and fabricated statements: A meta-analysis. *Law and human behavior*, 40(4), 440.
- Oliveira, C. M., & Levine, T. R. (2008). Lie acceptability: A construct and measure. *Communication Research Reports*, 25(4), 282–288. <https://doi.org/10.1080/08824090802440170>
- Ong, S., & Nilsen, E. S. (2025). Children's endorsement of prosocial lies according to content and recipient knowledge. *First Language*, 46(1), 20–42. <https://doi.org/10.1177/01427237251348529>
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of experimental social psychology*, 45(4), 867-872. <https://doi.org/10.1016/j.jesp.2009.03.009>

- Paulhus, D. L. (1986). Self-deception and impression management in test responses. In *Personality assessment via questionnaires: Current issues in theory and measurement* (pp. 143-165). Berlin, Heidelberg: Springer Berlin Heidelberg.
- Porter, C. N., Morrison, E., Fitzgerald, R. J., Taylor, R., & Harvey, A. C. (2020). Lie-detection by strategy manipulation: Developing an asymmetric information management (AIM) technique. *Journal of Applied Research in Memory and Cognition*, 9(2), 232-241. <https://doi.org/10.1016/j.jarmac.2020.01.004>
- Porter, C.N. , Talyor, R., Lee, R., Chioatto, E., Hill., M., & Harvey, A.C.(2023) Applying asymmetric information management (AIM) technique to virtual interviewing. *Applied Cognitive Psychology*, 37(3), 470-479. <https://doi.org/10.1002/acp.4049>
- Porter, C.N. (2026). Training manual provided for the coding sessions. Online
- Ruby, C.L. & Brigham, J.C. (1998) Can criteria-based content analysis distinguish between true and false statements of African-American speakers? *Law and Human Behavior*, 22(4), 369–388. <https://doi.org/10.1023/A:1025766825429>
- Schell-Leugers, J. M., Vanderhallen, M., Bogaard, G., Landstrom, S., Masip, J., Myklebust, T., Volbert, R., Nieuwkamp, V., & Kassin, S. M. (2026). A European-wide survey of police officers' beliefs and perceptions on suspect interviews. *Psychology, Crime & Law*, 1–32. <https://doi.org/10.1080/1068316X.2026.2651154>
- Semrad, M., Scott-Parker, B., & Nagel, M. (2019). Personality traits of a good liar: A systematic review of the literature. *Personality and Individual Differences*, 147, 306-316. <https://doi.org/10.1016/j.paid.2019.05.007>

- Serota, K. B., Levine, T. R., & Boster, F. J. (2010). The prevalence of lying in America: Three studies of self-reported lies. *Human Communication Research*, 36(1), 2-25.
<https://doi.org/10.1111/j.1468-2958.2009.01366.x>
- Serota, K. B., Levine, T. R., & Docan-Morgan, T. (2022). Unpacking variation in lie prevalence: Prolific liars, bad lie days, or both? *Communication Monographs*, 89(3), 307–331.
<https://doi.org/10.1080/03637751.2021.1985153>
- Serota, K. B., Levine, T. R., Zvi, L., Markowitz, D. M., Docan-Morgan, T. (2024). The ubiquity of long-tail lie distributions: Seven studies from five continents, *Journal of Communication*, 74 (1), 1–11. <https://doi.org/10.1093/joc/jqad040>
- Shahvaroughi A, Bahrami Ehsan H, Hatami J, Shahvaroughi MA, Paulo RM (2022). "The cognitive interview: comparing face-to-face and video-mediated interviews". *Journal of Criminal Psychology*, 12(4), 74–89. <https://doi.org/10.1108/JCP-10-2021-0041>
- Sporer, S. L., & Schwandt, B. (2007). Moderators of nonverbal indicators of deception: A meta-analytic synthesis. *Psychology, Public Policy, and Law*, 13(1), 1.
<https://doi.org/10.1037/1076-8971.13.1.1>
- Sporer, S. L., Manzanero, A. L., & Masip, J. (2021). Optimizing CBCA and RM research: Recommendations for analyzing and reporting data on content cues to deception. *Psychology, Crime & Law*, 27(1), 1-39.
<https://doi.org/10.1080/1068316X.2020.1757097>
- Sporer, S.L. & Masip, J. (2023). Millennia of legal content criteria of lies and truths: wiSDom or common-sense folly?. *Frontiers in Psychology* 14:1219995.
<https://doi.org/10.3389/fpsyg.2023.1219995>

- Steller, M. & Köhnken, G. (1989) Criteria-based statement analysis. In: Raskin, D.C. (Ed.) *Psychological Methods in Criminal Investigation and Evidence*. New York: Springer, pp. 217–245.
- Stokke, A. (2018). Lying, sincerity, and quality. In J. Meibauer (Ed.), *The Oxford handbook of lying* (pp. 134–148). Oxford University Press.
<https://doi.org/10.1093/oxfordhb/9780198736578.013.10>
- Strömwall, L., & Granhag, P. A. (2003). How to detect deception? Arresting the beliefs of police officers, prosecutors and judges. *Psychology, Crime and Law*, 9(1), 19–36.
<https://doi.org/10.1080/10683160308138>
- Strömwall, L. A., & Willén, R. M. (2011). Inside criminal minds: Offenders' strategies when lying. *Journal of Investigative Psychology and Offender Profiling*, 8(3), 271–281. <https://doi.org/10.1002/jip.144>
- Sánchez, N., Masip, J., & Herrero, C. (2021). How people [try to] detect lies in everyday life. *TRAMES: A Journal of the Humanities & Social Sciences*, 25(4), 395–419.
<https://doi.org/10.3176/tr.2021.4.02>
- Tabata, N., & Vrij, A. (2023). Differences between Japanese and British participants in self-reported verbal strategies to appear convincing. *Psychiatry, Psychology and Law*, 30(2), 177–191. <https://doi.org/10.1080/13218719.2021.2003269>
- Talwar, V., & Lee, K. (2008). Social and cognitive correlates of children's lying behavior. *Child Development*, 79(4), 866–881. <https://doi.org/10.1111/j.1467-8624.2008.01164.x>
- Turi, A., Rebeleş, M. R., & Visu-Petra, L. (2022). The tangled webs they weave: A scoping review of deception detection and production in relation to Dark Triad traits. *Acta Psychologica*, 226, 103574. <https://doi.org/10.1016/j.actpsy.2022.103574>

- Turi, A., Zloteanu, M., Solescu, D.M., Rebeleş, M.-R., And Visu-Petra. L.(2025). Behind bars and lies: Dark personality traits, lying, and detecting deception in the prison population versus the general community. *Applied Cognitive Psychology*, 39(6). <https://doi.org/10.1002/acp.70132>
- Undeutsch, U. (1989). The development of statement reality analysis. In J. C. Yuille (Ed.), *Credibility assessment* (pp. 101–121). Dordrecht, The Netherlands: Kluwer.
- Verigin, B. L., Meijer, E. H., Bogaard, G., & Vrij, A. (2019). Lie prevalence, lie characteristics and strategies of self-reported good liars. *PLOS ONE*, 14(12). <https://doi.org/10.1371/journal.pone.0225566>
- Verigin, B. L., Meijer, E. H., & Vrij, A. (2020a). Embedding lies into truthful stories does not affect their quality. *Applied Cognitive Psychology*, 34(2), 516–525. <https://doi.org/10.1002/acp.3642>
- Verigin, B. L., Meijer, E. H., Vrij, A., & Zauzig, L. (2020b). The interaction of truthful and deceptive information. *Psychology, Crime & Law*, 26(4), 367–383. <https://doi.org/10.1080/1068316X.2019.1669596>
- Verigin, B. L., Meijer, E. H., & Vrij, A. (2021). A within-statement baseline comparison for detecting lies. *Psychiatry, Psychology and Law*, 28(1), 94–103. <https://doi.org/10.1080/13218719.2020.1767712>
- Vrij, A., Mann, S.A., Fisher, R.P. *et al.* (2008). Increasing cognitive load to facilitate lie detection: The benefit of recalling an event in reverse order. *Law and Human Behavior*, 32, 253–265. <https://doi.org/10.1007/s10979-007-9103-y>
- Vrij, A. (2008). *Detecting lies and deceit: Pitfalls and opportunities*. John Wiley & Sons.

- Vrij, A., Ennis, E., Farman, S., & Mann, S. (2010). People's perceptions of their truthful and deceptive interactions in daily life. *Open Access Journal of Forensic Psychology*, 2, 6-49.
- Vrij, A., Granhag, P. A., & Porter, S. (2010). Pitfalls and opportunities in nonverbal and verbal lie detection. *Psychological Science in the Public Interest*, 11(3), 89-121.
<https://doi.org/10.1177/1529100610390861>
- Vrij, A., & Granhag, P. A. (2012). Eliciting cues to deception and truth: What matters are the questions asked. *Journal of Applied Research in Memory and Cognition*, 1(2), 110-117.
<https://doi.org/10.1016/j.jarmac.2012.02.004>
- Vrij, A., Mann, S., Leal, S., & Fisher, R. (2012). Is anyone there? Drawings as a tool to detect deceit in occupation interviews. *Psychology, Crime & Law*, 18(4), 377-388.
<https://doi.org/10.1080/1068316X.2010.498422>
- Vrij, A., Leal, S., Mann, S., & Fisher, R. (2012c). Imposing cognitive load to elicit cues to deceit: inducing the reverse order technique naturally. *Psychology, Crime & Law*, 18(6), 579-594.
<https://doi.org/10.1080/1068316X.2010.515987>
- Vrij, A., Mann, S., Leal, S., Fisher, R. P., & Deeb, H. (2020). Sketching while narrating as a tool to detect deceit. *Applied Cognitive Psychology*, 34(3), 628-642.
<https://doi.org/10.1002/acp.3646>
- Vrij, A., Palena, N., Leal, S., & Caso, L. (2021). The relationship between complications, common knowledge details and self-handicapping strategies and veracity: A meta-analysis. *The European Journal of Psychology Applied to Legal Context*, 13(2), 55-77.
<https://doi.org/10.5093/ejpalc2021a7>

- Wang, Q., Song, Q. & Kim Koh, J.B. (2017) Culture, memory, and narrative self-making. *Imagination, Cognition and Personality*, 37(2), 199–223. <https://doi.org/10.1177/0276236617733827>
- Whitty, M. T., & Carville, S. E. (2008). Would I lie to you? Self-serving lies and other-oriented lies told across different media. *Computers in Human Behavior*, 24(3), 1021-1031. <https://doi.org/10.1016/j.chb.2007.03.004>
- Whitty, M.T., Buchanan, T., Joinson, A.N. And Meredith, A. (2012). Not all lies are spontaneous: An examination of deception across different modes of communication. *Journal Of the American Society for Information Science and Technology*, 63, 208-216. <https://doi.org/10.1002/asi.21648>
- Wright, G. R., Berry, C. J., Catmur, C., & Bird, G. (2015). Good liars are neither 'dark' nor self-deceptive. *PLOS ONE*, 10(6), e0127315. <https://doi.org/10.1371/journal.pone.0127315>
- Yarbrough, P. G., & Hart, C. L. (2025). Lies in the dark: An analysis of dark personality traits and dishonesty. *Personality and Individual Differences*, 240. <https://doi.org/10.1016/j.paid.2025.113161>
- Zhang, Z., & Baryshevtsev, M. V. (2025). An exploration of individuals' self-perceptions of deception: Acceptability, detectability, deceptiveness. *Atlantic Journal of Communication*, 33(4), 683–698. <https://doi.org/10.1080/15456870.2025.2473438>
- Zuckerman, M. (2008). Zuckerman-Kuhlman Personality Questionnaire (ZKPQ): An operational definition of the Alternative Five Factorial Model of Personality. In G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *The SAGE handbook of personality theory and assessment, Vol. 2. Personality measurement and testing* (pp. 219–238). Sage Publications, Inc. <https://doi.org/10.4135/9781849200479.n11>