



Digging Further Into the Speech of Liars: Future Research Prospects in Verbal Lie Detection

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The field of verbal lie detection has grown rapidly in the past decade. Derived by the assumption that lies have different content patterns than do truths, research in this area promotes searching for content criteria to detect them. One prime content-based indicator for deception detection, which stems from the Reality Monitoring (RM) theory (1), is *richness in detail*. According to RM, truthful memories of actual events originate in perceptual experience and are embedded in the context of time and space. As such, they are expected to include more spatial and temporal contextual attributes (i.e., locations, spatial arrangement of people and objects, times, duration and sequence of events) and perceptual attributes (i.e., what the individual felt, tasted, smelled, heard, or saw when the event took place) than do false memories, which originate in self-generated thought or imagination. Derived from this prediction, the traditional use of richness in detail as an indicator of deception is based on the *number* of perceptual and contextual details in the interviewee's accounts. However, as a memory source-monitoring theory, RM does not take into consideration the intention of liars to deceive and consequently cannot explain the full scope of *richness in detail* in the field of deception (2). In contrast to false memories, where the individual has no intention to deceive but *wrongly* believes that his/her memory of an event that never happened is truthful, fabricated memories are an outcome of manipulation [and have thus been labeled "self-manipulated memories"; (2)]. Liars frequently attempt to manipulate their fabricated accounts to make them seem truthful (3–5), for example by *intentionally* adding false perceptual and contextual details (6, 7). Affecting the quantity of the details in their fabricated accounts, such strategic manipulations reduce the diagnostic efficacy of the *richness in detail* indicator. Yet, in the current paper, we aim to show that the same strategies leave traces on the quality of details. Therefore, we propose that to maximize the potential utility of the *richness in detail* indicator, it is necessary to dig deeper into the speech of liars, particularly by looking for traces of deception strategies found in the *quality* of the details. In fact, the Verifiability Approach [VA; (4, 8)] applies this notion.

THE VERIFIABILITY APPROACH (VA)

The VA (8) for lie detection was initiated based on the understanding that lies, by nature, are based on strategies. The first VA study (4) clearly demonstrated that lie detection benefits more from consideration of the *quality* of perceptual and contextual details than it does from consideration of their quantity alone.

According to the VA, the strategy employed by liars is guided by the *liars' dilemma hypothesis*. Specifically, liars perceive richness in detail as an indicator of truthfulness (9, 10) and are thus motivated to provide many details to make an impression of honesty (7, 11). On the other hand, the provision of details also puts liars at risk, as the truthfulness of the details provided can be checked. Aware of this danger [see (6, 7)], liars are inclined to avoid mentioning false details, to minimize the chances of being caught. These two contradicting motivations—for and against the provision of details—put liars in a dilemma. A strategy that resolves the conflict involves the provision of details that cannot be checked and verified.

When used by liars, this strategy of providing non-verifiable information affects the quantity and quality of the contextual and perceptual details that appear in their accounts. They “inflate” the quantity of detail by incorporating false, non-verifiable, details, and as a result provide accounts that appear closer to the RM prototype of truthful accounts (i.e., accounts rich in perceptual and contextual details). However, their strategy leaves traces in the quality of their accounts, in terms of verifiability. By assessing the quality (i.e., the verifiability of the contextual and perceptual details) rather than the quantity of details provided, it is possible to reveal the liars' strategy, and thereby indicate their lies.

In the last years, the validity of the VA, which was originally developed and tested in police interview setting [e.g., (4, 5, 12, 13)] has been examined in other settings including insurance [e.g., (14–17)], airport security [see (18, 19)], occupation [e.g., (20)], and malingering [e.g., (21, 22)]. Some of these applications were more successful than others, but mostly the VA perspectives were confirmed [for a recent review see (23)], thereby providing an empirical evidence to the profitability of looking for quality of details. Encouraged by the success of the VA, we propose that research in this field should dig further into the speech of liars, in an attempt to identify additional indications of strategies in the quality of details provided. As such, we present two new approaches, both are derived from the theoretical and empirical framework of the VA.

CONTEXT EMBEDDED PERCEPTION (CEP)

The first approach was recently proposed by the authors of the current paper Nisin and Nahari (in preparation), who suggest that the qualitative differences between perceptual and contextual details can serve as a potential generator of deception strategy. According to this approach, while perceptual information is actually experienced, and acquired directly by the senses, contextual information is virtual in its nature, and based on semantic knowledge and relative conceptualizations. For instance, we experience the perceptual aspects of an interaction with a friend through our senses: we see the friend and the clothes he is wearing, hear his speech, and feel his touch. Meanwhile, the contextual aspects of this interaction, such as its length and specific location, are based on conceptualization and knowledge. In fact, the contextual attributes are imposed on the perceptual details and frame them in time and space.

Accordingly, the perceptual details (e.g., visions, smells, sounds, sensations, and tastes) can be regarded as primary data, and the contextual details (e.g., indications of where, when, and for how long those perceptual details were experienced)—as meta-data. Obviously, the truthfulness of perceptual details can be checked only when they are given by the interviewee within the framework of contextual information regarding time and space. Thus, the contextual details are those that confer the status of verifiability upon perceptual details. Considering the differences between the two types of details in light of the VA (8), liars would be expected to avoid the provision of contextual details as often as possible. Motivated to provide non-verifiable details, they would be likely to provide perceptual details without framing them in time and space, making it difficult to check their truthfulness. Truth-tellers, on the other hand, would be expected to freely provide both types of details, as they have no reason to avoid verification. Thus, the prediction yielded from this approach is that liars, when adding false details to their accounts, will strategically prefer to provide perceptual details over (or without) contextual details, while truth-tellers will provide both types of details. As such, the number of contextual details in an account can serve as a verbal lie indicator.

RESOLUTION OF VERIFIABILITY (ROV)

The second approach involves the resolution of the verifiable details provided, as determined by the immediacy in which the information they incorporate can be verify. A good example of such resolution involves the use of names, which already found significance for lie detection (24). According to the VA (4), events that occurred in the presence of another person will be considered verifiable only when that person can be traced. Once an identifiable person has been mentioned, that person can be approached to confirm the truthfulness of the reported occurrences. However, the mention of a name is not a necessary condition for rendering the person identifiable and traceable. It is reasonable to assume that an interviewee who mentions a “friend” or “neighbor,” even without volunteering a name, has considered that the police will ask about the person's specific identity, especially because identified persons can serve as witnesses (i.e., prime and significant evidence) who can confirm details in the interviewee's account. Consequently, it is likely that by mentioning persons who can be traced, with or without mentioning their names, interviewees mean, or at least are aware of the fact, that they are providing verifiable details [see (8)]. The difference between the two conditions (named vs. unnamed but traceable) is in the *resolution* of the verifiable details provided: names increase the resolution of the details. The mention of an identifiable person without a name leaves the interviewees with degrees of freedom, at least temporarily, such that the verifiability of the details is neither immediate nor easy (relatively speaking) to check. Importantly, these degrees of freedom also range, as mentioning an unnamed uncle, for example, leaves less degrees of freedom than mentioning an unnamed acquaintance. These assumptions lead to the expectation that liars, when they do provide verifiable details,

will strategically prefer low-resolution over high-resolution details, while truth-tellers will prefer high-resolution details. Again, as with the contextual details, the number of low-resolution verifiable details in an account can serve as a verbal lie indicator.

CONCLUSIONS

The current paper is a call for more strategy-based research in the field of verbal lie detection. By demonstrating how strategies blur the differences in *detail quantity* while sharpening the differences in *detail quality* between truthful and fabricated accounts, we stress that research should go beyond the surface of content, to look for strategies that activate verbal behaviors among liars, define the qualitative manifestations of their strategies, and then—to exploit these manifestations in indicating their lies. The

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VA, a new and promising paradigm for deception detection is an outcome of this research approach. Having presented two new, un-studied, strategy-based approaches to further demonstrate and extend this line of research, we propose that following this path will benefit the field both theoretically and practically.

AUTHOR CONTRIBUTIONS

GN: conceptualization and writing the first draft, revising and editing. ZN: conceptualization and review and editing.

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Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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