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ORIGINAL PAPER

How People Really Suspect and Discover Lies

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Abstract Previous research suggested that real-world lies are detected through hard evidence, such as physical evidence or a direct confession, and not via nonverbal clues. However, we argue that discovering a lie is a process, and nonverbal clues are an important source of information that can induce suspicion, which then triggers the search for hard evidence. We replicated an original study suggesting the irrelevance of nonverbal clues, but experimentally manipulated the wording of the critical question as 'discovering' a lie versus 'suspecting' a lie. A second study was conducted that further manipulated the phrasing to ask about 'events' versus 'clues' that led one to detect the lie. Results of both studies showed that those asked about suspecting a lie cited nonverbal behaviors significantly more often than those asked about discovering a lie. Thus, in contrast to previous research, these findings suggest the importance of behavioral clues (e.g. verbal and nonverbal behavior), specifically in the early stage of lie detection.

Keywords Deception · Nonverbal cues · Lying · Discovering · Suspecting

Deception research has historically focused on either observing verbal or nonverbal behavioral cues that typically correlate with deception, or measuring a receiver's ability to detect deception from the behaviors of senders. Despite the effort put into this line of

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research, no single cue has been linked firmly to deception (DePaulo et al. 2003; Zuckerman et al. 1981) and accuracy based upon judgments of behavior tends to be only slightly above chance levels (Aamodt and Custer 2006; Bond and DePaulo 2006).[1] This has led some researchers to believe that perhaps past studies have failed to focus upon the methods of lie detection used by people in real-world scenarios.

Park et al. (2002) asserted that the procedures often used by laboratory studies of deception lack external validity; namely, that people do not frequently utilize nonverbal or verbal cues (collectively hereafter referred to as 'behavioral evidence') when attempting to detect deception in the real world. Park et al. (2002) posited that people typically discover lies through third party information, confessions, physical evidence, and inconsistencies with prior knowledge (collectively hereafter referred to as 'non-behavioral evidence'). The possibility that people do not frequently use behavioral cues to discover lies outside of a laboratory setting, they stressed, could reasonably explain why no conclusive results have linked nonverbal or verbal cues to lying.[2]

To test their conjecture that people do not frequently use behavioral cues in the discovery of lies, Park et al. (2002) conducted a survey study on how lies are typically discovered. Participants were asked to recall a real-life lie they had discovered, and to answer four questions about the timing and method of their discovery. Two of the key survey questions were phrased: "Describe in as much detail as you can the events surrounding your discovery of the lie; how exactly did you find out that the person lied to you?" and "How much time passed between the time when the lie was first told and the time that you knew for sure that the person had lied?" Park et al. (2002) produced two notable findings. First, only 2.4% of participants reported discovering lies through nonverbal or verbal behavior alone.[3] This number increased to 11.3% when verbal and nonverbal behaviors were used in combination with another method. Second, 62% of their sample reported that they detected lies through non-behavioral evidence.

Park et al. (2002) suggested that behavioral and non-behavioral methods of discovering a lie may have interacted in two ways: (a) behavioral information was reported to increase participants' suspicion, motivating them to gather additional evidence, or (b) participants reported discovering a lie through non-behavioral evidence, then viewing the liar's behavior as additional confirmation. Park et al. (2002) noted that although their research methods were simplistic, their findings had important implications for the field of deception detection; specifically, that nonverbal cues are not frequently used in the real-world detection of lies. Specifically they asserted that "people most often rely on information other than the verbal and nonverbal behaviors of the liar when deciding if they have been deceived" and that "the results of deception detection research may have limited application to non-research settings" (p. 145). This study played a pivotal role in focusing research on non-behavioral clues to detecting lies (Blair et al. 2010, 2012; Bond and DePaulo 2006; Vrij et al. 2010).

When considering the results of Park et al. (2002), we believe it is important to clarify the distinction between *discovering* a lie and *suspecting* a lie. Discovering can be defined

[1] Deception detection "wizards" and certain law enforcement officers have demonstrated much stronger accuracy when judging high-stakes lies (O'Sullivan et al. 2009; O'Sullivan and Ekman 2004).

[2] This is an assumption we feel is not justified; the reason behaviors were originally studied was to see if individuals could detect deception from behavior alone, not because researchers believed that people do detect deception by behavior alone. Although if you are a parent you know you often detect a child's deception by behavior alone (see Frank and Svetieva 2013, for a review).

[3] Based on the sample, the Park et al caution that this number should only be considered in its relative size, not as a generalizable percentage.

as the *result* of a search or the observation of evidence, and is synonymous with revealing or finding. This definition strongly implies the presence of hard evidence, as hard evidence is the only thing that can 'prove' a lie. For example, upon hearing the sentence, "The archaeologist *discovered* that there were bones underground," one would assume that the archaeologist had hard evidence of the bones' existence (Bond et al. 1992; Burgoon and Walther 1990). Any challenge to that account of discovery would be addressed by showing the concrete proof. On the other hand, upon hearing the sentence, "The archaeologist *suspected* there were bones underground," one would assume that the archaeologist did not yet have hard evidence of the bones' existence. It is this suspicion without hard evidence that would prompt them to initiate a dig to obtain the hard evidence. Similarly, those arrested for crimes are called suspects until the evidence is presented in court to discover, or prove beyond a reasonable doubt, that they are guilty. Any challenge to an account of suspicion would be addressed by outlining the reasoning or clues as to why one suspected the individual.

Theoretical work in evolutionary psychology has suggested that feelings of distrust and suspicion activate a domain-specific mechanism containing cognitive, affective, and action tendencies. Just as a gazelle who is being stalked by a lion will experience shifts in perception (e.g. hearing every footstep), goals (e.g. the urge to flee becoming primary), conceptual frames (e.g. a dichotomy between dangerous and safe), and redirected information gathering (e.g. feeling the need to find a safe place; Tooby and Cosmides 2005), so do people (e.g. Frijda 1986; Susskind et al. 2008). Additionally, research has demonstrated that distrust sensitizes people to discrepancies from the norm and makes it more likely that they will seek anomalies (Schul et al. 2008). This logic is consistent with research on expectancy violations of nonverbal behavior; observers infer "fishy-looking" behaviors like head-tilting and intense staring to be associated with deception (Bond et al. 1992).[4]

What this all means is that on many—but not all—occasions, behavioral information initiates the lie detection process. Following this logic, the function of behavioral information is not to immediately prove that a lie has been perpetrated (given that discovery implies hard evidence); rather, the function of these behavioral cues, through their deviations from the liar's normal behavioral baseline, initiate suspicion and the search for evidence. For example, you're meeting your usually calm, relaxed friend for coffee. After asking him why he did not attend your party last night, you begin to notice him uncharacteristically blushing or taking much longer to respond. Although he verbally responds with "I was not feeling well," this behavioral anomaly leads you to suspect that your friend is not being forthcoming. Remaining unconvinced, you might press him for further information regarding his alleged illness, or you might ask a third party if he or she saw your friend last night—a question you might not have normally asked this third party. Then, if the third party said, "Oh… but my friend said they saw him at a different party…", or if your friend senses his lie is about to be exposed, he may offer a direct confession that he was at this other party. This of course would confirm your suspicions that he was lying about the illness. The combination of suspicion (through nonverbal cues) and discovery (through non-behavioral evidence) highlights the function of behavioral evidence in this two-step lie detection process. Thus, the discovery of a lie based on non-

[4] Although suspicion and distrust can make people feel the need to search for truth, we acknowledge that lies can also be discovered serendipitously. For example, a lie about infidelity can be detected through opening the bedroom door to find one's partner in the throes of passion with another. However, this would really be detecting a concealment lie, as nothing is spoken; particularly if fidelity was implied in the relationship.

behavioral or 'hard' evidence would appear to be almost always at the end stage of the detection process. It becomes apparent then that the results of Park et al. (2002) speak only to the end state of lie detection, but not to the entire process. This would suggest that if the question asked by Park et al. (2002) was phrased differently, such that it referred to the suspicion phase of the process, we would expect a different pattern of results, with behavioral cues playing a significantly larger role in the process of lie detection.

Study 1

Our first study is a replication of Park et al. (2002), but with an extension in which we experimentally manipulate the question regarding lie detection. Specifically, we randomly assigned participants to one of two forms of the question used in the original Park et al. (2002) study. Some are asked the original question—about *discovering* that someone lied, whereas others are asked about *suspecting* that someone lied. Given our rationale about the process involved in detecting lies, we offer the following hypotheses:

H1a Participants will report non-behavioral evidence (third party information, physical evidence, confessions, and inconsistencies with prior knowledge) more often than behavioral evidence in the *discovered* condition (replicating Park et al. 2002).

H1b Participants will report behavioral evidence more often than non-behavioral evidence in the *suspected* condition.

When comparing across question conditions, we predict:

H2a Participants will report significantly more non-behavioral evidence than behavioral evidence when asked about *discovering* versus *suspecting* a lie.

H2b Participants will report significantly more behavioral evidence than non-behavioral evidence when asked about *suspecting* versus *discovering* a lie.

Method

Participants

Participants were 162 undergraduate communication students (69 female, 93 male) from a large university in the northeastern United States. They received extra credit towards their class grade for participation in the study. Ages ranged from 18 to 24 ($M = 19.67$, $SD = 1.37$). Four participants did not disclose their lie discovery/suspicion method, leaving us with final $N = 158$. All procedures were approved by the internal review board at which data collection took place.

Design

The independent variable was the phrasing of the "nature of the lie" question (suspicion versus discovery), which was manipulated in a between-subjects design. Participants were randomly assigned to recall a recent time in which they either suspected ($n = 83$) they had been lied to, or discovered ($n = 75$) they had been lied to. The dependent variable was the type of cue/clue reported by the participants. Participants were instructed to record as much

detail about the event as they could recall. Open-ended questions served as the guidelines for presenting the details of the event.

Procedure

The two-page surveys were distributed in introductory communication courses during normal class time. The surveys were randomly shuffled and participants were asked to take the top survey (the critical question about suspecting versus detecting did not appear on the top page). The survey asked participants to recall a time that they either suspected or discovered that they were being lied to. Participants in the discovering condition were asked (identical to Park et al. 2002): "Now, think about how you found out that the person lied to you. Describe in as much detail as you can the events surrounding your discovery of the lie; how exactly did you find out that the person lied to you?" Participants in the suspecting condition were asked: "Now think about how you suspected that the person lied to you. Describe in as much detail as you can what clues told you they were lying."

Subsequently, participants answered four open-ended questions adapted from Park et al. (2002). First, participants were asked when the lie originally occurred. Second, participants were asked to state their relationship to the liar. The third question asked participants to describe in detail how they found out that they were being lied to. Fourth, participants were asked to recall how much time had elapsed between the time when the lie was first told and the time that they knew for sure that the person had lied. Though we collected data on these four questions like Park et al. (2002), they were not of interest to our hypotheses and as such were not included in analyses. Finally, demographics were collected.

Coding

Participant responses were coded using the same scheme as Park et al. (2002). All questionnaires were independently coded by two trained coders ($N = 162$, Kappa = .81). Coders categorized each participant's reported method of discovery or suspicion into one of eight categories including: third party information (94% agreement), physical evidence (87% agreement), solicited direct confession (80% agreement), unsolicited direct confession (83% agreement), at the time verbal/nonverbal cues (100% agreement), inconsistencies with prior knowledge (78% agreement), combination of factors (55% agreement).

For testing the current hypotheses, physical evidence, third party information, confessions (solicited and unsolicited), and inconsistencies with prior knowledge were grouped into a single variable labeled non-behavioral evidence. As the hypothesis compares frequencies of behavioral and hard evidence methods, the inter-coder reliability for these critical categories was calculated (Kappa = .93). Inter-coder agreement for non-behavioral evidence was 97% and behavioral evidence was 100%. Coders, who were blind to the condition, then resolved any disagreement by discussing each of their views and reaching a mutual decision. Inter-coder reliability for the critical categories (behavioral and non-behavioral evidence) was above accepted levels.

Results

When asked about *discovered* lies, participants reported using physical evidence the most ($n = 28$, 37.3%), followed by third party information ($n = 27$, 36.0%), a combination of factors ($n = 3$, 4.0%), an unsolicited direct confession ($n = 6$, 8.0%), inconsistencies with

prior knowledge ($n = 5$, 6.7%), a solicited direct confession ($n = 5$, 6.7%), and nonverbal and verbal behavior ($n = 1$, 1.3%). Non-behavioral evidence accounted for 96.0% of all methods reported, compared to only 1.3% for behavioral evidence. These percentages are relatively consistent with those reported by Park et al. (2002); like them, our results showed that participants were more likely to report non-behavioral evidence, and least likely to report behavioral evidence when asked to describe how they *discovered* a lie (see Fig. 1). This supports H1a, and replicates the results of Park et al. (2002).

When asked about *suspected* lies, participants reported using behavioral evidence the most ($n = 36$, 43.4%), followed by physical evidence ($n = 16$, 19.3%), inconsistencies with prior knowledge ($n = 15$, 18.1%), a combination of factors ($n = 9$, 10.8%), third party information ($n = 6$, 7.2%), an unsolicited direct confession ($n = 1$, 1.2%). No participant cited a solicited direct confession. Thus the single most important factor when participants were asked about suspected lies was the behavioral evidence, as predicted in H1b. However, when combining physical evidence with inconsistencies, third party info, and combinations, then they totaled more than behavioral evidence.

A Fisher's exact test, which is related to Chi square but controls for the small cell size in the discovered condition, was conducted to test the overall effect of discovered versus suspected on method used. The test indicated significant differences in method used across conditions, $r = .54$, $p < .001$.

To test hypotheses H2a and H2b, we observed the adjusted standardized residuals from the Fisher's exact test contingency table. Supporting H2a, we found that participants in the discovered condition were more likely to report that non-behavioral evidence drove their judgment than those in the suspected condition (adjusted standardized residual = 6.6).

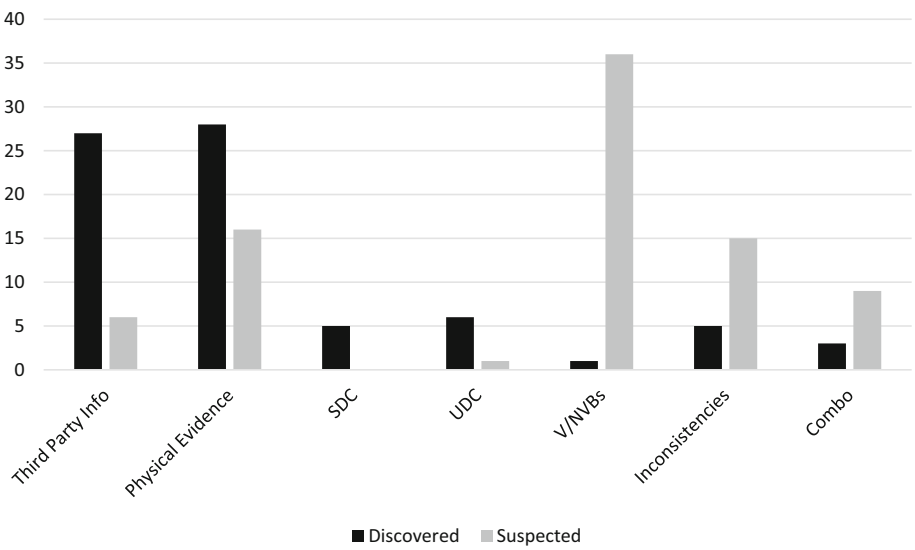

Fig. 1 Frequencies of reported method used to discover or suspect lies. Category labels from left to right signify third party information, physical evidence, solicited direct confession, unsolicited direct confession, verbal or nonverbal behaviors at the time of the lie, inconsistencies with prior knowledge, and a combination of factors

Similarly, supporting H2b, we found that participants in the suspected condition were more likely to report behavioral evidence than those in the discovered condition (adjusted standardized residual = 6.6).

Taken together, this means that participants who were asked about suspicion were more likely to report nonverbal/verbal behavior than harder evidence; those asked about discovery were more likely to report harder evidence. These results are consistent with our logic that behavioral information may trigger the suspicion needed to push for harder non-behavioral evidence, which then ultimately would lead to the discovery of the lie.

Less than 2% of participants in both Park et al. (2002) and the present study reported utilizing behavioral evidence as the basis for discovering lies. This percentage increased to 43.4% when participants were asked about suspected lies. Thus our hypotheses were strongly supported, as behavioral evidence outweighed the other possible responses when the question was rephrased to ask about suspected (as opposed to discovered) lies.

Discussion

Results of Study 1 showed that people asked about discovering a lie were far more often to cite non-behavioral evidence than behavioral as methods of spotting a liar, which replicates Park et al. (2002). Extending their research, we also found that participants asked about suspecting a lie reported using behavioral evidence from the liar as cues far more often than those asked about discovering a lie. These results are consistent with our argument that behavioral cues are often used in the early stage of the lie detection process to initiate the search for the harder evidence that allows one to discover that a lie had been perpetrated, which is of course the end stage.

The fact that a simple change of wording entirely changes the result is quite stunning, but predictable in social science (e.g. see Kahneman et al. 1982). Thus the specifics of each word may be essential. However, a critic may argue that the phrases were different enough from each other that other factors may have driven the result. For example, in our wording of the central question regarding participants' suspicion/discovery methods, we used the word "clues" in the suspected condition and the word "events" in the discovery condition. To account for this potential biasing, we conducted a second study that included four conditions to systematically manipulate the words discovered and suspected with the words clues and events.[5]

Study 2

For Study 2 we predicted the same two hypotheses as those in Study 1.

H1a Participants will report non-behavioral evidence as more important than behavioral evidence in the *discovered* condition.

H1b Participants will report behavioral evidence as more important than non-behavioral evidence in the *suspected* condition.

Further, because there is no basis for a prediction regarding the use of clues versus events, we pose the following research question:

[5] Thank you to the reviewer who suggested this extension.

RQ1 Will people asked about events report non-behavioral evidence more or less than those asked about clues?

Method

Participants

Participants were 142 undergraduate communication students (87 female, 52 male, 3 undisclosed) from a large university in the northeastern United States. Like Study 1, they received extra credit towards their class grade for participation in the study. Ages ranged from 18 to 50 ($M = 21.78$, $SD = 4.62$). Again, all procedures were approved by the internal review board at which data collection took place.

Design

Study 2 featured a 2 (discovered versus suspected) × 2 (events versus clues) factorial design. Conditions only varied in the "nature of the lie" question used in Study 1. In the two discovered conditions, the question read, "Now, think about how you found out that the person lied to you. Describe in as much detail as you can the *clues* (Condition 1)/*events* (Condition 2) surrounding your discovery of the lie; how exactly did you find out that the person lied to you?" In the two suspected conditions, the question read, "Now think about how you suspected that the person lied to you. Describe in as much detail as you can the *clues* (Condition 3)/*events* (Condition 4) surrounding your suspicion of the lie; how exactly did you suspect that the person maybe lied to you?" Participants were randomly assigned to one of these four conditions ($n_{condition\ 1} = 38$, $n_{condition\ 2} = 34$, $n_{condition\ 3} = 36$, $n_{condition\ 4} = 34$).

Procedure

The procedure was identical to that of Study 1, although now there were four versions of the questionnaire.

Coding

The same coding protocol was used from Study 1. Two trained coders independently coded two conditions each out of the four total conditions ($N = 138$, Kappa = .85). Coders again categorized each participant's reported method of discovery or suspicion into one of eight categories including: third party information (90% agreement), physical evidence (79% agreement), solicited direct confession (67% agreement), unsolicited direct confession (66% agreement), at the time verbal/nonverbal cues (91% agreement), inconsistencies with prior knowledge (75% agreement), combination of factors (61% agreement).

Results

To test H1a, we collected frequencies of behavioral evidence and non-behavioral evidence for participants in both discovered conditions (Conditions 1 and 2). Because some participants cited a combination of factors, we extracted the methods used in each combination and then dropped "combination of methods" as a counted variable. As predicted, participants cited non-behavioral evidence (80 reports; 86%) far more than behavioral

evidence (13 reports; 14%). This is consistent with both Park et al. (2002) and the current paper's Study 1.

Next, we collected frequencies of behavioral and non-behavioral evidence for participants in both suspected conditions (Conditions 3 and 4). Participants cited non-behavioral evidence 53 times (62.4%) and behavioral evidence 32 times (37.6%). To test H1b, we conducted a Chi square test with discovered versus suspected as the rows and method as the columns. The Chi square was significant, $\chi^2(1) = 13.17$, $p < .001$. Consistent with H1b, participants in suspected conditions reported using behavioral evidence significantly more often than those in discovered conditions.

To test RQ1, we conducted two separate Chi square tests (one each for discovery and suspected conditions) with events versus clues as the rows and method as the columns. The Chi squares were both non-significant ($ps > .10$). Figure 2 presents a holistic comparison of the results of Park et al. (2002), Study 1, and Study 2.

Discussion

In testing H1a, we found that people cited non-behavioral evidence far more than behavioral evidence as their method in the discovered conditions. This is consistent with both Park et al. (2002) and the current paper's Study 1. Regarding H1b, we found that people in the suspected conditions cited behavioral evidence as their method significantly more often than those in the discovered conditions. This is consistent with the results of Study 1. Again, we see that behavioral evidence is utilized, but mainly as a means of suspicion rather than discovery.

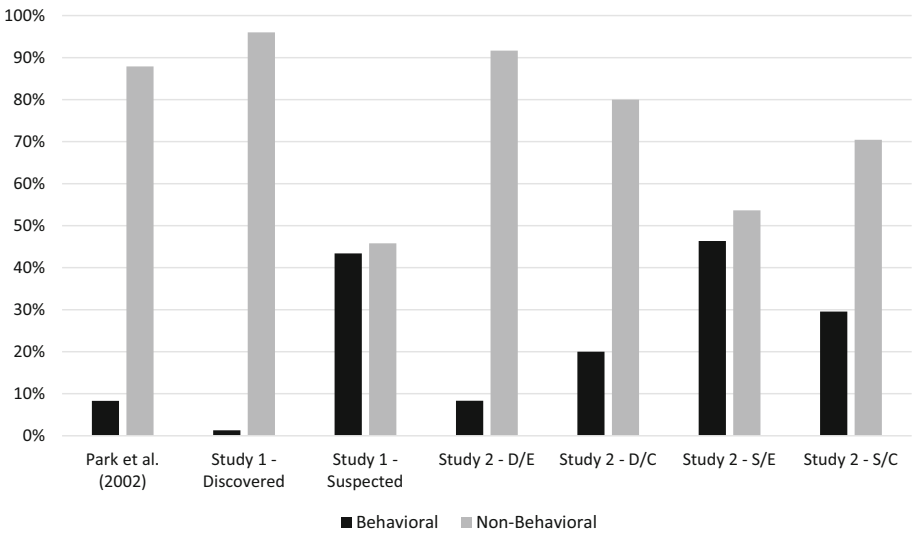

Fig. 2 Percentages of the reported methods used from the current studies and Park et al. (2002). Regarding the Study 2 labels, D/E represents the discovered/events condition, D/C represents the discovered/clues condition, S/E represents the suspected/events condition, and S/C represents the suspected/clues condition

General Discussion

The goal of these two studies was to determine if the reported use of behavioral evidence to detect lies would differ when participants were asked to discuss suspected lies as opposed to discovered lies. In both studies, we found that behavioral evidence was among the least cited reasons for discovering a lie, replicating the findings of Park et al. (2002). However, behavioral evidence was cited far more often for suspecting a lie, as we predicted.

Our results suggest two possible interpretations of Park et al.'s (2002) study. The first is that their use of the phrases "found out" and "knew for sure" may have implied that only hard evidence would suffice; thus, the phrasing of the question was a demand that biased participants toward reporting hard evidence as the reason for discovery. This interpretation would suggest that Park et al.'s (2002) results were merely an artifact of the phrasing of the question. Our findings reinforce the notion that a small change in question phrasing can entirely change the pattern of a study's results (see Schwarz 1999 for a review on this issue). As described in the introduction, discovering inherently implies the existence of concrete evidence, whereas suspecting inherently implies that concrete evidence has not yet been obtained. It is not an accident that scientists have used the phrase "behavioral clues" or "behavioral cues" to lying; they have not used the term "behavioral proof" of lying. After all, research has consistently shown that there is no human version of a Pinocchio-like response that, when present, guarantees a person is lying (Zuckerman et al. 1981). Most behavioral scientists researching deception have stated that unimpeachable corroborating evidence is the only way to know for sure whether someone is lying (e.g. Ekman 1985/2001).

The second interpretation, and the one we more strongly favor over the first, is that these results do not invalidate the findings of Park et al. (2002). Rather, our findings serve to support their findings on the limited importance of behavioral cues when *discovering* a lie, and then elaborate upon their findings by showing the greater importance of behavioral cues when *suspecting* a lie. By illustrating lie detection as a process of suspicion and discovery, these findings reaffirm the importance of behavioral cues during the initial phase of the detection process. Park et al. (2002) showed evidence for only the back half of the detection process—how lies are discovered. Therefore, we partially disagree with the title "How People Really Detect Lies." Their paper could have been more aptly titled, "How Lies Are Actually Verified."

Future research, then, should be explicit about defining suspected lies as opposed to discovered lies. Park et al. (2002) report in their manuscript results regarding the methods used for *detecting* lies. However, participants in their study were actually asked about the *discovery* of a lie, which illustrates an inherent contradiction. Park et al. (2002) asked their participants how they managed to "find out that the person lied," (p. 150) and how they "knew for sure that the person had lied?" (p. 150). The use of this language could reasonably have biased participants towards citing evidence-based methods in their responses. Thus, examining one part of the lie detection process should not suffice as an understanding of the entire process. Akin to the apocryphal story of the seven blind individuals who each described an elephant by feel, each individual producing a very different description of an elephant depending on the part they touched—the trunk, the ears, the body, or the legs—researchers must be cautious to limit their findings to only the part of the elephant they examined and avoid sweeping statement about the whole beast. To be fair, Park et al. (2002) carefully noted that behavioral can stimulate suspicion in the absence of harder evidence. In the real world, hard evidence may not be available,

therefore a lie may be suspected but never truly discovered. Thus the data in this paper concurs with their assertion.

The most important conclusion to draw from Park et al. (2002) and the present studies is that the previous de-emphasis of behavioral clues for detecting lies was premature. Moreover, the two categories were erroneously combined, thus little research has looked at the unique aspects of lie suspicion and lie discovery. For example, research has not yet determined the relative influence of suspected lies compared to discovered lies on interpersonal interactions, as the two have been used interchangeably.

Suspected lies likely influence interpersonal interactions, personality judgments, questions, and decision making. For example, a consumer who suspects that a salesperson is frequently deceptive could pursue evidence to confirm the lies. Or, it could be that the consumer may make decisions based on suspicion alone; for example, he or she may choose not to shop with that particular salesperson despite the lack of harder evidence.

Our results do not indicate whether the instances of behavioral evidence utilized were valid indicators of deception. We do not know how many times behavioral information triggered suspicions that were ultimately not founded, or worse, resulted in a false accusation of lying. Our participants only described times when they ultimately knew someone was lying. This means that our results do not indicate the accuracy of perceptions of lying based upon behavioral cues. Moreover, it also may just be a hindsight bias (put in ref here lads) where they believed there were behavioral clues to deceit when in fact there were none. Future research should examine the interactions and distinctions between suspected and discovered lies in addition to the role of behavioral cues and harder evidence.

Additionally, the role of suspicion in the process of detection warrants further investigation. The research on suspicion and evolutionary psychology suggests that suspicion and distrust stimulate cognitive, affective, perceptual, and behavioral changes (Schul et al. 2008; Tooby and Cosmides 2005). Saying that behavioral reactions of others are not used during the discovery of lies is like saying that seismology is useless in the discovery of oil. Although oil is discovered by drilling shafts, one does not arrive at that stage until they have observed the topology, examined the types of rock formations, evidence for organic decay, and other clues that suggest that oil will be found. Similarly, suspicious behaviors lead to enhanced vigilance, sometimes resulting in the discovery of a lie.

One should be cautious about interpreting the percentages in our results as representative of human beings in general day-to-day life, as Park et al. (2002) also noted. We asked for a lie that participants could readily recall. Lies that could have been generated upon deeper reflection may have changed the results. Additionally, as in the Park et al. (2002) study, our sample was not representative of the general public. However, given that the lies solicited were real life lies, not told in a laboratory, they are the definition of ecologically valid. Thus, we can conclude that behavioral information is an important part of the lie detection process, and is far from being useless or ecologically invalid. Their question nicely addressed the narrow, final, and definitive stage of the process, where one confirmed—or "found out"—that someone had lied. This finding was an important contribution to our understanding of the process of deception detection, as others had previously only asserted it to be true (e.g. Ekman 1985/2001). Our studies have widened the lens upon which we can examine the deception detection process, and that wider spotlight now reveals that in fact behavioral clues are important, but most so at the initial phase of the lie detection process. We can conclude that previous research was not entirely misguided.

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