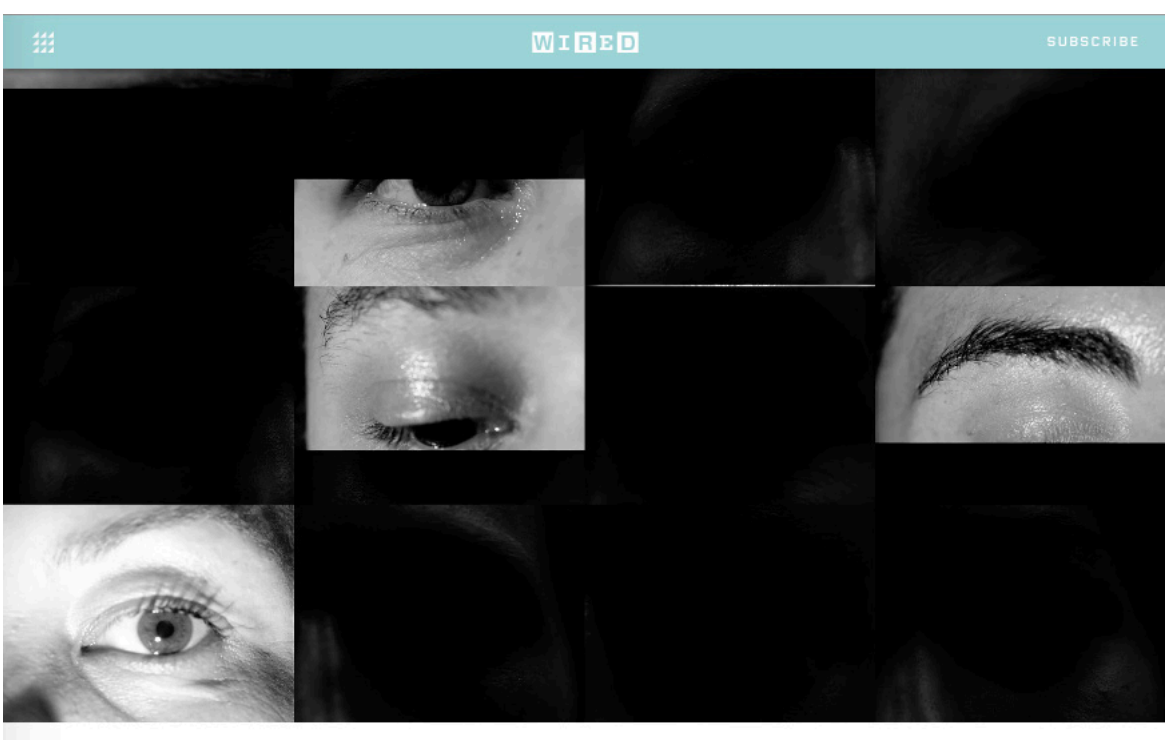

Released in 2014 by Converus, a Mark Cuban–funded startup, EyeDetect is pitched by its makers as a faster, cheaper, and more accurate alternative to the notoriously unreliable polygraph. VIDEO BY BETH HOLZER, ANIMATION BY CASEY CHIN

NOTE: Freelance writer Mark Harris appears to be focused on discrediting lie detection technology in general. He wrote another article for WIRED that was posted on October 1, 2018 that attempted to discredit polygraph: The Lie Generator: Inside the Black Mirror World of Polygraph Job Screenings

MARK HARRIS BACKCHANNEL 12.04.18 07:00 AM

AN EYE-SCANNING LIE DETECTOR IS FORGING A DYSTOPIAN FUTURE

SITTING IN FRONT of a Converus EyeDetect station, it's impossible not to think of *Blade Runner*. In the 1982 sci-fi classic, Harrison Ford's rumpled detective identifies artificial humans using a steam-punk Voight-Kampff device that watches their eyes while they answer surreal questions. EyeDetect's questions are less philosophical, and the penalty for failure is less fatal (Ford's character would whip out a gun and shoot). But the basic idea is the same: By capturing imperceptible changes in a participant's eyes—measuring things like pupil dilation and reaction time—the device aims to sort deceptive humanoids from genuine ones.

It claims to be, in short, a next-generation lie detector. Polygraph tests are a $2 billion industry in the US and, despite their inaccuracy, are widely used to screen candidates for government jobs. Released in 2014 by Converus, a Mark Cuban–funded startup, EyeDetect is pitched by its makers as a faster, cheaper, and more accurate alternative to the notoriously unreliable polygraph. By many measures, EyeDetect appears to be the future of lie detection —and it's already being used by local and federal agencies to screen job applicants. Which is why I traveled to a testing center, just north of Seattle, to see exactly how it works.

Jon Walters makes an unlikely Blade Runner. Smartly dressed and clean cut, the former police chief runs Public Safety Testing, a company that conducts preemployment tests for police forces, fire departments, and paramedics in Washington State and beyond. Screening new hires used to involve lengthy, expensive polygraph tests, which typically require certified examiners to facilitate them. Increasingly, however, Walters tells me, law enforcement agencies are opting for EyeDetect.

Unlike a polygraph, EyeDetect is fast and largely automatic. This bypasses one of the pitfalls of polygraphs: human examiners, who can carry their biases when they interpret tests. According to Walters, biases don't really "come into play" with EyeDetect, and the test takes a brisk 30 minutes as opposed to the polygraph's 2- to 4-hour-long slog. Moreover, EyeDetect is a comfortable experience for the test subject. "When I was wired up for the polygraph, it was kind of intimidating," Walters told me. "Here you just sit and look into the machine."

"When I was wired up for the polygraph, it was kind of intimidating," Walters told me. "Here you just sit and look into the machine."

I settle in for a demonstration: a swift 15-minute demo where the test will guess a number I'm thinking of. An infrared camera observes my eye, capturing images 60 times a second while I answer questions on a Microsoft Surface tablet. That data is fed to Converus' servers, where an algorithm, tuned and altered using machine learning, calculates whether or not I'm being truthful.

The widely accepted assumption underlying all of this is that deception is cognitively more demanding than telling the truth. Converus believes that emotional arousal manifests itself in telltale eye motions and behaviors when a person lies.

Converus claims that EyeDetect is "the most accurate lie detector available," boasting 86 percent accuracy. By comparison, many academics consider polygraph tests to be 65 to 75 percent accurate. The company already claims close to 500 customers in 40 countries, largely using the EyeDetect for job screening. In the US, this includes the federal government as well as 21 state and local law enforcement agencies, according to Converus. The Department of State recently paid Converus $25,000 to use EyeDetect when vetting local hires at the US Embassy in Guatemala, WIRED's reporting revealed. Converus says its technology has also been used in an internal investigation at the US Embassy in Paraguay.

In documents obtained through public records requests, Converus says that the Defense Intelligence Agency and the US Customs and Border Protection are also trialing the technology. Converus says that individual locations of Best Western, FedEx, Four Points by Sheraton, McDonald's, and IHOP chains have used the tech in Guatemala and Panama within the last three years. (A 1988 federal law prohibits most private companies from using any kind of lie detector on staff or recruits in America.)

COMMENT: Before Dr. David Raskin's association with Converus, he worked with Senators Hatch and Kennedy to write the Employee Polygraph Protection Act (EPPA) of 1988. That legislation is a clear indication that the Converus Science Team appreciates the problems associated with the use of polygraph for screening employees, and they have worked to protect the public from abuses legislatively and with the development of EyeDetect. EyeDetect is not perfect, but because it is automated, it eliminates many of the concerns expressed by the scientific community about using polygraphs for screening.

WIRED reached out to all five companies, but none were able to confirm that they had used EyeDetect.

CLARIFICATION: These tests were conducted by Converus Service Partners, which are authorized resellers of Converus technologies. Converus has verification from its service partners that EyeDetect pre-employment screening tests were performed in 2016 by them at the request of the local subsidiaries. If WIRED Magazine contacted the U.S.-based corporate offices about Converus, those offices would likely be unaware because the business relationship is through the local Converus Service Partner in-country.

However, a close reading of records of EyeDetect's use, obtained through public records requests, suggest that a reliable, useful, and equitable lie detector is still the stuff of science fiction. WIRED found that like polygraphs, EyeDetect's results may introduce human bias and manipulation into its results.

REBUTTAL: Unlike the polygraph, EyeDetect is completely automated. A computer administers and scores the results. Unlike the polygraph, the person who administers the test can have absolutely no influence on the outcome — in that sense, it is completely unbiased. That said, Converus uses the test data in combination with historical information to adjust the sensitivity of the scoring algorithms for different settings. We discuss this more in the context of other misstatements by Harris below.

"Converus calls EyeDetect a next-generation lie detector, but it's essentially just the same old polygraph," says Vera Wilde, a transparency activist and independent researcher who has been studying polygraphs for many years. "It's astounding to me that there are paying customers deploying this technology and actually screening people with it," adds William Iacono, professor of psychology, psychiatry, neuroscience, and law at the University of Minnesota.

REBUTTAL: According to a Google search, Vera Wilde is an American poet and painter with a 2014 Ph.D. in politics. Based on an online copy of her CV in 2017, she has had no training in psychophysiology, has never collected or analyzed any psychophysiological data, and has one peer-reviewed publication in what may be a legitimate scientific journal on a topic that appears to be completely unrelated to deception detection. She hardly can be considered an expert on the polygraph or any other psychophysiological method for credibility assessment.

In contrast, the second critic, William Iacono, is a psychophysiologist and has conducted research on the polygraph. But to our knowledge, he has no direct experience with the methods or measures used by EyeDetect. Iacono is an ardent advocate of a polygraph technique known as the Concealed Information Test and has a decades-long history of acrimonious debate about alternative polygraph techniques in the scientific literature and in court with members of the Converus science team. His opinion on the scientific basis and evidence in support of EyeDetect was predictable and hardly unbiased.

But the fact that EyeDetect is cheaper and faster than a polygraph might make Converus' new lie detector a tantalizing option for hiring offices across the country—a technology that could move into widespread use just as quietly as it leapt into existence.

TAKING AN EYEDETECT test is as painless as Jon Walters promised. He asks me to pick a number between 1 and 10 and write it on a scrap of paper before I sit down in front of the EyeDetect camera. Walters instructs me to lie about my chosen number, to allow the system to detect my falsehood. If I beat it, Walters promises to give me $50. (Journalistic ethics mean I'd pass any winnings along to a charity.)

A series of questions flash across a screen, asking about the number I picked in straightforward and then roundabout ways. I click true or false to each question. The EyeDetect camera feels no more intrusive than a normal webcam, and I do my best to keep my face and expression neutral, whether I'm lying or telling the truth.

Almost immediately after the test is over, the screen flashes a prediction based on my eye motions and responses. EyeDetect thinks that I chose the number 3. I had, in fact, picked the number 1. But when I reach for Walters' crisp $50 note, he stops me. It turns out that Walters' interpretation of "a number between 1 and 10" includes only the digits 2 through 9. I had fooled the machine, but only by not playing by its rules. On my next attempt, the system correctly detects my hidden number.

Having my mind read is unsettling, and makes me feel vulnerable. It's like I've been tricked by a magician—but that doesn't mean I'd trust an illusionist to vet my local police chief.

REBUTTAL: Harris didn't fool the machine on the first go-round. *He didn't follow instructions for the Numbers Test*. During the test, the instructions to Harris stated that he should write down a number from 2 to 9. Harris did not comply. The computer doesn't even analyze the ocular-motor data for the number 1 and could not possibly detect deception on that question. But when Harris followed instructions, EyeDetect demonstrated it works by successfully identifying the number he chose.

Converus derives its 86 percent accuracy rate from a number of lab and field studies. But an upcoming academic book chapter written by the company's chief scientist and cocreator of EyeDetect, John Kircher, shows that from study to study the accuracy rates can vary quite a bit, even dipping as low as 50 percent for guilty subjects in one experiment.

The only peer-reviewed academic studies of Converus' technology have been carried out by the company's own scientists or students in their labs. These present largely positive results. "This is a huge problem," says John Allen, a professor of psychology at the University of Arizona. "If the only evidence in a medical trial came from a researcher with a financial interest in the product, no one would dare to think it has proven efficacy."

REBUTTAL: Dr. Allen was concerned that only University of Utah scientists and students have conducted peer-reviewed studies of Converus' technology. This concern would have merit if, in fact, we published only positive findings. We report accuracy rates in the scientific literature that summarize all of our research on the ocular-motor deception test – the good, the bad, and the ugly. On one hand, we're criticized because we "present largely positive results." On the other hand, we are criticized because we have seen accuracy rates that "dip as low as 50%." If we published only positive results, Harris would not know that certain conditions produce accuracies at low as 50%. We invite the reader to see a recent review article to decide for themselves whether we report only positive results, and whether Harris presents an oversimplified and misleading view of this technology by reporting one particular set of results for conditions that are not representative of field settings (see: Kircher, J. C., 2018. Ocular-motor Deception Test. In P. Rosenfeld (Ed.), Detecting Concealed Information and Deception, Academic Press.). Also, we challenge Dr. Allen to show us one academic at a research university who does not have a financial conflict of interest. Research institutions base merit raises and promotions mostly on publication records. Faculty gain job security (tenure) by publishing their research in scientific journals. Because journals typically publish only positive results, faculty are incentivized to produce experiments with positive results. We'd be in a sorry state of affairs if a financial conflict of interest invalidated findings published by academics in the scientific literature.

Notwithstanding our concern that the WIRED article questions our integrity and transparency, we agree with Dr. Allen that the work should be replicated in other labs by independent investigators. For more than a decade, we have sought independent replication by federal agencies that use deception detection technologies or are tasked with vetting new deception detection technologies. Only recently, and under pressure from Congress, has the government agreed to conduct an independent evaluation of EyeDetect. Unfortunately, they have indicated that their research will not begin until January of 2019, and it will take 18 months.

Even so, some in-house experiments reveal potential flaws with the device. In a study from 2013, the National Security Agency used an early version of EyeDetect to identify NSA employees who had taken a cellphone into a secure area, a minor security violation. The test accurately identified just 50 percent of those guilty of the mistake (the same as you would expect from chance) and just over 80 percent of those innocent.

The test accurately identified just 50 percent of those guilty of the mistake—the same as you would expect from chance.

In his book chapter, Kircher writes that the NSA's study, which promised an hour off work to those who passed, did not produce what Kircher calls a meaningful incentive. "In order for these tests to work, there needs to be jeopardy and proper protocols must be followed," Converus president and CEO Todd Mickelsen told Wired.

REBUTTAL: Our experiments and field research are characterized by large numbers of cases, often three to four times greater than most research that uses eye trackers in top-tier, peer-reviewed scientific journals. Studies that contain large numbers of cases give dependable estimates of accuracy. Therefore, when we get low accuracy rates in a study, we believe those findings and learn to avoid conditions or settings where the technology works less well. From the NSA study, we learned that accuracy suffers when there are no adverse consequences to the individual if they fail or no meaningful incentives to pass the test. However, we fail to see how this is a serious limitation of the technology because the conditions at NSA were unlike any conditions we encounter in real-world applications of the technology or well-designed laboratory experiments. Harris focuses readers' attention on that one, unrepresentative finding when the bulk of scientific evidence supports an entirely different conclusion, and he did so not once, but twice in the same article. Harris' characterization of the scientific literature on this technology is misleading.

It's difficult to instill a feeling of peril in a study subject, a condition that presumably makes testing difficult. In 2016, a Converus marketing manager wrote to an investigator at the Kent police department, in the suburbs of Seattle: "Please note, when an EyeDetect test is taken as a demo ... the results are often varied from what we see when examinees taking the test under real test circumstances where there are consequences."

Jeopardy is a slippery concept, Wilde says: "There are many things, such as anxiety about results for both liars and truth-tellers, which could conceivably influence the physiological responses at issue."

REBUTTAL: It goes without saying that the vast majority of people will be anxious when they take a lie detector test — whether or not they intend to lie. No one wants to fail such a test. The greater the consequences of failing the test, the more highly motivated a person will be to pass the test. We know from our research at NSA and other experiments that accuracy is lower for people who are less motivated to pass the test. Based on these findings, we predicted that accuracy will be higher when we test actual job applicants, employees, or criminal suspects than volunteers for lab experiments. The 86% accuracy rate cited by Converus was obtained from actual job applicants for government positions, and it is higher than the 83% mean accuracy we observe in lab experiments, although the 3% difference is not statistically significant.

For the past four and a half years, Converus has been researching countermeasures that subjects might use to beat EyeDetect, such as squinting, using eye drops, or failing to respond. Based on that research and the belief that rapid-fire questioning allows little opportunity for deception, Converus says that its system have been tuned to "virtually eliminate" these countermeasures' effectiveness.

After reading two of EyeDetect's academic papers, Allen told WIRED: "My kindest take is that there is some promise, and that perhaps with future independent research this test might provide one measure among many for formulating a hypothesis about deceptive behavior. But even that would not be definitive evidence."

Even assuming Converus' most optimistic accuracy rating, an EyeDetect screening would turn out a large number of false positives when used to evaluate a large group of people for a rare crime, like terrorism. Kircher himself advises against relying solely on EyeDetect, or any single screening technology for detecting such offenses. "Even if a test is 90 percent accurate, about 10 percent of the tested population would fail it, and the vast majority of those individuals who fail the test would be innocent of the crimes," he writes. (Converus says that EyeDetect's false positive rate of 10 percent is the lowest of any credibility assessment technology on the market today, including polygraph.)

REBUTTAL: EyeDetect has a low false positive rate, but when used to screen a large population of individuals to identify the few that are possibly guilty, even at a rate of 10% there will be many false positive results. We recommend that in this context where there is a low base rate of guilt and the need to identify the rare — but potentially costly — terrorist or spy, EyeDetect be coupled with other sources of information (such as background checks or physical evidence) to help reduce the false positives.

The company decided not to publish results of their first field experiment in Colombia, a study that appeared to show EyeDetect working erratically. "Although the data were limited, the [test] appeared to work well when we tested well-educated people who had applied to work for an airline, but the [test] was ineffective when we tested less well-educated applicants for security companies," Kircher writes. Kircher speculated that the aspiring security guards might have had reading problems that meant they could not understand the test, and Converus says it now accounts for reading ability during testing. But without published data, other researchers aren't able to evaluate what exactly caused the system's spotty performance.

REBUTTAL: We chose not to submit results from Colombia for publication because we ran a series of small pilot studies, manipulating aspects of the test almost weekly, to determine if we could identify an approach that would achieve accuracies in excess of 80% in this population. We never ran enough cases in any one of those conditions to expect any reputable journal to publish the results. Harris implies that we chose not to publish those negative finding in order to hide them from the scientific community and the public. But that is false, *and Harris knows it is false*. We discussed the Colombian results in two separate review articles (links to European Polygraph journal and the chapter in Rosenfeld's book), we discuss the results from Colombia in our presentations to government agencies and user groups, and we have told members of the media about those results, including Harris.

Why did we get low accuracy rates in Colombia? In an EyeDetect test, the computer presents text versions of the test questions visually on the computer monitor and instructs examinees to read and answer the questions as quickly and accurately as possible. EyeDetect requires a minimal level of reading proficiency. If the person cannot read, a reading-based test for deception is not likely to work well. We had never conducted research in Colombia before, and we were unaware of the poor reading skills of many of people we tested. Second, we tested job applicants in Colombia about recent drug use. To determine whether the EyeDetect test result was correct or incorrect, we compared the ocular-motor test results to the results of urinalysis. In a subsequent field study, we discovered that 69% of the people who confessed to drug use following the EyeDetect test passed both urine and hair tests for illicit drugs. In other words, almost 70% of the results of drug tests were wrong on people who admitted that they had lied on the EyeDetect test. So, except in rare cases when the person failed the urine test, the results of the drug tests could not tell us if a particular EyeDetect decision was correct or wrong. Of course, we did not know at the time that drug tests are often wrong and could not be used as a basis for estimating the accuracy of the EyeDetect test.

By "spotty performance," Harris gives the impression that the results obtained in lab and field studies vary considerably. In fact, under standard testing conditions, results vary little from one study to the next. We report results known as validity coefficients that show the relative power of individual ocular-motor measures to discriminate between truthful and deceptive people. We report those values in all of our published studies. They tell us how useful each measure is likely to be in deciding if a person was credible or not credible. Any knowledgeable researcher or statistician would conclude that the data obtained using the same test formats we deploy in field settings are consistent over various research studies.

Correspondence with law enforcement investigators, supplied as part of WIRED's public records requests, reveals EyeDetect has given surprising results in real life, too. In January 2017, Alan McCarty, a sergeant at the Columbus, Georgia, Police Department, wrote to Converus' vice president of marketing and operations, Russ Warner, about an applicant who had admitted to using marijuana within the previous two years but still passed the EyeDetect test, which normally asks about illicit drug use. (In his response at the time, Warner suggested that perhaps the applicant had problems with his left eye, which could have affected the results.)

Over at the Salt Lake City Police Department, Converus' first law enforcement customer, a sergeant told Warner about a similar case, where an applicant admitted to a disqualifying action but still aced the EyeDetect test with a score of 78. (50 is a pass.) Warner detailed a way this could happen: "We set the scoring algorithm to be less sensitive for [this person]. If we had used a standard algorithm, that person would have scored less than 49 (deceptive)."

REBUTTAL: EyeDetect is not perfect. No technology to detect deception is perfect or probably ever will be. If the test were perfect, what deceptive person would ever agree to take one? We expect that about 15% of deceptive people will beat the test. To seek out and highlight the occasional error makes for a compelling argument if the reader has a limited background in science, but the occasional error does not change the long-run average accuracy rates achieved by EyeDetect in multiple lab experiments and field studies, independently reviewed by knowledgeable scientists and published in peer-reviewed scientific journals and books. *To suggest otherwise is disingenuous and a disservice to readers of WIRED magazine.*

"If you're going to administer tests to existing sworn officers, we should create a new test, with a softer algorithm. This is what we've done in other agencies."

Emails show that Converus has encouraged police departments to set an easier test for personnel transferring from other law enforcement agencies. "If you're going to administer tests to existing sworn officers, we should create a new test, with a softer algorithm. This is what we've done in other agencies," Warner told Columbus' McCarty early in 2017. Mickelsen says that modifying the base rate of guilt for some examinees "improves accuracy" and is "a standard practice" in polygraphy.

McCarty did not seem to be convinced: "We don't differentiate in the [polygraph] between [law enforcement officers and civilians]. [The applicant, a deputy sheriff] was asked about committing serious crimes, drugs use, theft and violating her oath as a law enforcement officer. Not really following the logic on this one," he wrote.

Not only can departments choose between administering a hard or soft test, another email exchange appears to show Converus changing test results when asked to do so. In January 2017, Alan McCarty had a candidate who passed an EyeDetect test, scoring 61. "I called him deceptive on the questions concerning drugs, theft and affiliation with gangs, terrorist organizations or subversive groups," McCarty wrote to Warner. "This is a 23-year-old kid who grew up in Atlanta that could have very well had some affiliation with gangs. Give me your thoughts."

After looking over the data, Warner responded. "His pupil data doesn't reveal deception. However, his linear eye movement does indicate some deception," he wrote. "The algorithm we are using right now to score the tests assumes a base rate of guilt of 20-25% ... If we modify the algorithm to consider a higher rate of test failure for the group in general, I believe [the applicant] would have scored less than 50 (fail)."

(McCarty later wrote to WIRED, "The fact that the candidate was from Atlanta played no bias nor did their socioeconomic status or race. The comment about Atlanta was only meant because gangs are more prevalent there than here in Columbus so the opportunity to be exposed could be greater.")

"This is a 23-year-old kid who grew up in Atlanta that could have very well had some affiliation with gangs. Give me your thoughts."

Converus is proud of the fact that its system is designed, according to Mickelsen, "to accommodate varying historical levels of test failure by its applicant pool." That is to say, subjects can be judged on how people of similar backgrounds have fared on credibility tests in the past. Law enforcement officers may get an easier ride, while those from the wrong part of town may face an uphill battle. Converus sees no problem with this kind of institutional bias. Mickelsen told WIRED, "Sensitivity can be adjusted for specific groups. This gives all examinees a fairer chance of being classified correctly. Most organizations can make good estimates of base rates by considering the number of previously failed background checks, interview data, confessions, evidence, etc."

John Allen worries that it is a dangerous practice. "[You] would need to have a very good database on which to estimate rates of guilt," he says. "Otherwise, leaving this up to the individual examiner will create a situation of high variability across examiners and the very real possibility of bias."

REBUTTAL: Contrary to Dr. Allen's view that we'd need "a very good database on which to estimate base rates of guilt," research indicates that even rough estimates of base rates improve decision accuracy, unless those estimates are extremely high or low. We do not use extreme base rate estimates; otherwise, the examinee's test data would have little influence on the outcome. More importantly, we do not leave decisions concerning base rates up to the individual examiner, and the outcome cannot "effectively be altered at the operator's discretion."

Civil liberties groups are also wary of EyeDetect. "The criticism of technologies like lie detectors is that they allow bias to sneak in," says Jay Stanley of the ACLU's Speech, Privacy, and Technology Project. "But in this case it sounds like bias isn't sneaking in—it's being welcomed with open arms and invited to stay for dinner."

REBUTTAL: We don't know what Jay Stanley of the ACLU was told, but he is mistaken. Unlike the polygraph, EyeDetect is completely automated and does not depend on the expertise, knowledge, or biases of the operator. The test is administered and scored by a computer. Operators cannot alter the outcome because they have no way to modify any of the information used by the computer to reach a decision.

To determine if a person is credible, we begin with the base rate, which is called the prior probability of deception, and we adjust it upward or downward based on the data we get from the eye tracker. Our algorithm classifies the tested individual as credible or not credible based on the adjusted (or posterior) probability of deception. The approach we use generally is accepted as a best practice in a branch of applied mathematics known as statistical decision theory. The theory tells us that base rates are a valuable source of information, and if we are rational, we should formally incorporate base rate information in the decision process to maximize test accuracy. We are unaware of any approach that would improve on accuracy across settings with differing base rates of deception. If anyone knows of a better approach, we would be happy to hear about it.

While the polygraph may be shockingly unreliable century-old technology, at least critics can reinterpret and discuss test results out in the open. EyeDetect is a closed system using a proprietary algorithm, whose results can effectively be altered at the operator's discretion. Its low price and automated operation also allow it to scale up in a way that time-consuming and labor-intensive polygraph tests never could.

REBUTTAL: Harris states that "critics can reinterpret and discuss polygraph test results out in the open, but Converus uses proprietary algorithms." Harris implies that EyeDetect cannot be evaluated by the public and/or scientific community. In fact, publication in scientific journals ensures that the methods used to obtain the findings, such as subject selection, data-generation procedures, feature extraction, and methods of analysis are not only appropriate but also are described in sufficient detail to allow others the opportunity to reproduce, extend, or challenge the findings. We publish our findings in well-regarded scientific journals and provide no less information on this technology than countless other publications on polygraph techniques. We will continue to subject our research to rigorous peer-review because it is an opportunity to not only disseminate new knowledge about the technology but also learn from our peers and improve on the methods we developed.

Converus told WIRED that a Middle Eastern country has purchased EyeDetect and is planning to use it to check whether people entering the country are associated with terrorist activity. In an email to the Salt Lake City Police Department last year, obtained through WIRED's public records requests, a Converus executive wrote that the company had "been identified as the solution for 'extreme vetting' by the new [Trump] administration." (Though there were discussions with the Trump administration about using EyeDetect for vetting, Converus says the administration never committed to using EyeDetect.)

And while polygraphs remain banned from most US courts, EyeDetect appears poised to enter the legal system. In May, a district court in New Mexico became the first court to admit an EyeDetect test, in the trial of a former high school coach accused of raping a 14-year-old girl. The defendant passed the test, and the jury failed to agree on a verdict. Hearings on the admissibility of EyeDetect are due in at least four other states, the company tells me.

Unlike the polygraph, which is typically a one-off purchase, Converus earns money from every single test that each of its $3,500 EyeDetect stations runs. According to emails, in the fall of 2017 Converus was charging law enforcement agencies between $60 and $80 per test. If EyeDetect could replace even a fraction of the estimated 2.5 million polygraph tests conducted annually in the US, Converus would have a reliable revenue stream for years to come. Whether it will prove as reliable for those who take the test remains a more troubling question.

CONCLUDING REMARKS: Dr. Allen's comments were reasonable, and we would expect a knowledgeable, though critical, scientist to raise such points. We tried to address his concerns. What we did not expect was Harris' selective and misleading review of the research on this technology. We have been conducting psychophysiological research on the deception detection for over 40 years. Over the past 14 years, our research has focused almost exclusively on this technology. Our findings support the use of EyeDetect technology for criminal investigations and pre-employment screening, particularly for people seeking jobs in public safety and national security. You would never know that from reading this WIRED article. Harris attempted to inform his readers of what he erroneously perceives as a new scam designed to cheat people out of their money — maybe even their lives or freedom. Unfortunately for his readers, Harris seemed more intent on simply waging a crusade against yet another credibility assessment technology (read his previous article on polygraph) than summarizing what we know about this new technology and letting the reader decide if it is good or bad. We don't think that's too much to expect.