



@ the Urban Justice Center:
40 Rector Street, 9th Floor
New York, New York 10006
www.StopSpying.org | (646) 602-5600

**STATEMENT OF
ALBERT FOX CAHN, ESQ.
EXECUTIVE DIRECTOR
SURVEILLANCE TECHNOLOGY OVERSIGHT PROJECT (“S.T.O.P.”)**

**BEFORE THE
STANDING COMMITTEE ON JUDICIARY
NEW YORK STATE ASSEMBLY**

**FOR A HEARING CONCERNING
ONLINE ADMINISTRATION OF THE
BAR EXAMINATION IN NEW YORK**

**PRESENTED
DECEMBER 9, 2020**

Good morning, my name is Albert Fox Cahn, and I am the Executive Director of the Surveillance Technology Oversight Project (“S.T.O.P.”), a New York-based privacy and civil rights group. I appreciate the opportunity to testify against the remote bar exam and in favor of granting diploma privileges to any person who is otherwise qualified for admission to the New York State Bar.

In response to the ongoing COVID-19 pandemic, the New York State Board of Law Examiners (“BOLE”) again plans to use ExamSoft’s products to administer a remote February 2021 bar exam, including Examplify, ExamID, and ExamMonitor.¹ ExamID is an identity verification product that uses facial recognition scans at the start of each of the four sessions of the bar exam. Even more invasive, ExamMonitor records examinees through their computer’s camera and microphone, and, per ExamSoft’s own website, purports to use artificial intelligence (“A.I.”) that “detects abnormal student behavior that indicates when a student is potentially cheating.”² These forms of biometrics-driven artificial intelligence have historically proven to be biased and error prone, and both the BOLE and ExamSoft provide examinees little reason to believe these products will fare better in February than they did in October.

I. Facial recognition and artificial intelligence are dangerous and discriminatory.

Facial recognition is biased, error prone, and antithetical to the values of the Bar. Numerous studies have documented that these systems’ error rates are highest for people of color and female-presenting individuals.³ Facial recognition systems sometimes even fail to see that these individuals are human beings. For example, during New York’s mock bar exam in the weeks prior to the October test, some examinees reported having to shine lights directly on their faces just to be seen as human beings.⁴ In California, which also used ExamSoft’s products to administer a remote bar exam, ExamSoft repeatedly failed to recognize at least one African American examinee’s face during

¹ See Announcement, N.Y. Court of Appeals, February 2021 Bar Examination (Oct. 21, 2020), <https://web.archive.org/web/20201025013741/http://www.nycourts.gov/ctapps/>; Notice, N.Y. State Bd. of Law Examiners, February 2021 Bar Examination (Nov. 16, 2020), <https://web.archive.org/web/20201126151511/https://www.nybarexam.org/>.

² ExamMonitor, ExamSoft, <https://examsoft.com/solutions/exam-monitor> (last visited Dec. 17, 2020).

³ See, e.g., Patrick Grother et al., Nat’l Inst. for Standards & Tech., NISTIR 8280, *Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects* (2019), <https://doi.org/10.6028/NIST.IR.8280>; Joy Buolamwini & Timnit Gebru, *Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification*, 81 Proc. Machine Learning Res. 77 (2018), <http://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf>.

⁴ Khari Johnson, *ExamSoft’s Remote Bar Exam Sparks Privacy and Facial Recognition Concerns*, VentureBeat (Sept. 29, 2020, 9:07 AM), <https://venturebeat.com/2020/09/29/examsofts-remote-bar-exam-sparks-privacy-and-facial-recognition-concerns/>; see Stephanie Francis Ward, *Amid Claims that Online Bar Exam Went Well, Some Test-Takers Have a Different View*, A.B.A. J. (Oct. 20, 2020, 9:28 AM), <https://www.abajournal.com/web/article/amid-claims-that-online-bar-exam-went-well-some-test-takers-have-a-different-view>; see also Rebecca Heilweil, *Paranoia About Cheating Is Making Online Education Terrible for Everyone*, Recode (May 4, 2020, 7:00 AM), <https://www.vox.com/recode/2020/5/4/21241062/schools-cheating-proctorio-artificial-intelligence>.

the real exam, requiring him to take selfies and submit them just to enter exam sessions.⁵ We should never have used this discriminatory technology for the October exam, and we should not use it again in February.

Facial recognition is not unique—A.I. is undermined by biases. A.I. systems are shaped by countless human decisions, replicating and frequently augmenting the biases of the programmers who design the model and select its training data.⁶ Even where developers seek to eliminate bias, A.I. can still discriminate where algorithms improperly rely on proxies for protected characteristics.⁷ This is especially true concerning many examinees with disabilities who will inevitably be flagged for movements that the A.I. system does not consider “normal.”⁸ But even taking proactive measures to combat these automated biases is unlikely to mitigate them.⁹

These problems are exactly why the New York State Assembly and Senate banned facial recognition in our public schools,¹⁰ acknowledging that the technology is completely inconsistent with effective education. But if this invasive and error-prone technology is unfit for our classrooms, how could it possibly be appropriate for examinees’ bedrooms, or wherever else they can find privacy to take this exam?

Moreover, ExamSoft has released minimal information on its facial recognition and other A.I. models that does not even include its accuracy and error rates. Examinees and members of the public have no way to evaluate the reliability of such a testing scheme or how it reflects on test-takers’ fitness to practice law.

The fact that the BOLE is conducting the human review of all footage flagged by ExamSoft’s A.I. is of no comfort. At this very hearing, BOLE Executive Director John McAlary testified that they

⁵ Chase DiFelicianantonio, *California Bar Exam Takers Say Facial Recognition Software Rejected Them*, S.F. Chron. (Oct. 8, 2020, 9:00 AM), <https://www.sfchronicle.com/business/article/California-bar-exam-takers-say-facial-recognition-15629617.php>; see also Ward, *supra* note 4.

⁶ See *How Explainable AI and Bias are Interconnected*, ArthurAI (Apr. 24, 2020), <https://www.arthur.ai/how-explainable-ai-and-bias-are-interconnected>.

⁷ See *id.*

⁸ See *ExamMonitor*, *supra* note 2.

⁹ See Betsy Mason, *Making People Aware of Their Implicit Biases Doesn’t Usually Change Minds. But Here’s What Does Work*, PBS NewsHour (June 10, 2020, 7:00 PM), <https://www.pbs.org/newshour/nation/making-people-aware-of-their-implicit-biases-doesnt-usually-change-minds-but-heres-what-does-work> (“Even people with the best intentions are influenced by [implicit biases], behaving in ways that can create disparities in hiring practices, student evaluations, law enforcement, criminal proceedings—pretty much anywhere people are making decisions that affect others.”).

¹⁰ Carolyn Thompson, *NY Lawmakers Vote to Pause Facial Recognition in Schools*, Associated Press (July 23, 2020), <https://apnews.com/5b283de3cc0fe36eb12e34667e6deb09>.

were still sifting through hours of footage,¹¹ suggesting that ExamSoft's A.I. flagged so much footage that it took the BOLE far longer¹² to grade half the exams typically taken for the July bar,¹³ each of which had half the number of questions as usual.¹⁴ Moreover, unidentified, unnamed people reviewing thousands of hours of footage of examinees' homes is deeply invasive, prying into their most intimate spheres of life. The risks are far from theoretical. For example, proctors for The American Board of Surgery's General Surgery Qualifying Exam reportedly contacted examinees through social media after the exam.¹⁵

Additionally, ExamSoft's privacy policy states that it may share data with law enforcement,¹⁶ transforming the bar exam into a warrantless wiretap of examinees' residences. It is disturbing and deeply ironic that cohorts of lawyers were and will be tested on the protections against government searches at the same moment they were and are forced to use software that eviscerates those rights. Although Mr. McAlary testified that New York Judiciary Law prohibits the BOLE from turning footage over to law enforcement pursuant to a subpoena,¹⁷ the footage is stored on ExamSoft's servers. It is unclear if ExamSoft is bound by the same restrictions and whether those restrictions would even apply to federal subpoenas and warrants. And despite the BOLE's assurance that it "will destroy and/or direct ExamSoft to destroy" collected data "within a reasonable time"¹⁸ in order to mitigate this issue, ExamSoft itself acknowledges in its privacy policy that doing so may not always be possible.¹⁹

¹¹ *Online Administration of the Bar Examination in New York: Hearing Before the Assemb. Standing Comm. on Judiciary*, 2019–20 Reg. Sess., at 15:30 (N.Y. 2020) (testimony of John McAlary, Executive Director, New York State Board of Law Examiners), <https://nystateassembly.granicus.com/MediaPlayer.php> [hereinafter *Online Bar Exam Hearing*].

¹² For example, July 2019 bar exam was administered on July 30–31, 2019, and the BOLE released results on October 23, 2019. *Dates of Exams*, N.Y. State Bd. of Law Examiners, <https://www.nybarexam.org/ExamDates/ExamDates.html> (last visited Dec. 17, 2020); Press Release, N.Y. State Bd. of Law Examiners, July 2019 Bar Exam Results (Oct. 23, 2019), https://www.nybarexam.org/press/Press%20Release_July2019exam.pdf.

¹³ *Compare Online Bar Exam Hearing*, *supra* note 11, at 5:47 (testimony of John McAlary, Executive Director, New York State Board of Law Examiners) (noting that 5,150 people took the October 2020 remote New York bar exam), *with id.* at 11:05 (“[W]e typically test about 10,000 people in a July exam.”).

¹⁴ See *FAQs for October 5-6, 2020 Remote Exam in New York*, at 1, N.Y. State Bd. of Law Examiners, https://www.nybarexam.org/Docs/Revised%20FAQs%20NY%20Remote%20Exam_10.02.2020.pdf (last updated Oct. 2, 2020) [hereinafter *NY Remote Bar FAQs*].

¹⁵ See American Board of Surgery (@AmBdSurg), Twitter (July 16, 2020, 8:31 PM), <https://twitter.com/AmBdSurg/status/1283922325910491137>.

¹⁶ *Privacy Policy*, ExamSoft, <https://examsoft.com/privacy-policy> (last visited Dec. 14, 2020).

¹⁷ *Online Bar Exam Hearing*, *supra* note 11, at 30:50.

¹⁸ *NY Remote Bar FAQs*, *supra* note 14, at 5.

¹⁹ *Privacy Policy*, *supra* note 16 (“When ExamSoft has no ongoing legitimate business need to process personal data, we will either delete or anonymize/de-identify it or, if this is not possible (for example, because the data has been stored in backup archives), then ExamSoft will securely store the personal data and isolate it from any further processing until deletion is possible.”).

II. Remote proctoring software exposes examinees to identity theft.

Even if ExamSoft's A.I. works as advertised and is not discriminatory—which are big “ifs”—ExamSoft still collects troves of personal information that should be protected,²⁰ putting examinees at risk of identity theft, ransomware attacks, and other crimes. For example, ExamSoft records and timestamps every keystroke, records examinees through their computers' cameras and microphones, and disables all programs on examinees' computers.²¹ These features require unfettered access to critical parts of a computer's operating system.²² Many examinees must disable antivirus software just to install and run ExamSoft's software,²³ exposing their devices and the data contained therein.²⁴

The keylogging component is particularly alarming since, when combined with the need to disable antivirus software, it opens the door for malicious actors to covertly access passwords, security credentials, and other personal information, such as stored photos and videos.²⁵ Again, these risks are far from theoretical. Numerous New York bar examinees reported compromised passwords and fraudulent credit card transactions shortly after downloading ExamSoft's software.²⁶ And examinees in Florida, which used a different vendor, reported similar suspicious activity.²⁷ No matter the software vendor, remote proctoring software is susceptible to abuse.

These dangers may outlast the bar exam, with users frequently encountering difficulties fully uninstalling software that requires the level of system access needed for ExamSoft's products.²⁸ The risk to examinees is vastly increased if any of ExamSoft's components remains on a computer after the uninstallation process.

²⁰ Press Release, Ass'n for Software Testing, AST Comments on Online Exams 7, https://associationforsoftwaretesting.org/wp-content/uploads/2020/09/AST_Press_Release_on_Online_Exams.pdf.

²¹ *Administer Secure Remote Exams from Any Location*, ExamSoft, <https://examsoft.com/es/covid19-support> (last visited Dec. 14, 2020).

²² Press Release, *supra* note 20, at 8.

²³ *New York State Laptop Program for Uniform Bar Exam*, ExamSoft, <https://ei.examssoft.com/GKWeb/login/NYUBE> (last visited Sept. 2, 2020) (“You may be prompted to close any open programs and disable your antivirus program.”); Press Release, *supra* note 20, at 8; *see also* Tom McMasters, *Feasibility of a Mass Online California Bar Exam: 1. Cybersecurity* 9 (2020), <https://docs.google.com/document/d/1wpo5Mz9iZr003FUpXNMezGO2NNpH-Bbf9T2x4l7qHyQ>.

²⁴ Press Release, *supra* note 20, at 8.

²⁵ *Id.*

²⁶ Joe Patrice, *ExamSoft Responds to Multiple Reports that Software Compromises Security*, Above the Law (Sept. 3, 2020, 12:19 PM), <https://abovethelaw.com/2020/09/examssoft-responds-to-multiple-reports-that-software-compromises-security/>.

²⁷ Carolina Bolado, *Fla. Bar Exam Software Sows Chaos for Grads*, Law360 (Aug. 10, 2020, 10:14 PM), <https://www.law360.com/articles/1299950/fla-bar-exam-software-sows-chaos-for-grads>.

²⁸ Press Release, *supra* note 20, at 8.

Although examinees can avoid these risks by buying “burner” computers, few test-takers have the funds to buy a second laptop that they can discard after the exam. Many of these test-takers are in limbo, unable to work until they receive their bar admission. Asking them to purchase an extra computer is beyond unreasonable.

There is also the ever-present concern over a possible data breach of information stored by ExamSoft. At a minimum, ExamSoft will have copies of examinees’ government identification, photos, audio recordings, and video recordings. Even if ExamSoft destroys this data “within a reasonable time,” as the BOLE claims,²⁹ the risk is present for as long as this data is held. For example, remote proctoring vendor ProctorU—which ExamSoft partnered with to create the ExamMonitor software³⁰—recently suffered a data breach involving 440,000 user records dating back to 2012.³¹ This is especially worrying given Mr. McAlary’s inability to give even basic information about ExamSoft’s security measures.³²

These dangers are part of why software vendors like ExamSoft should conduct routine security audits, either internally or (preferably) by a third party. But ExamSoft provides no public information about any internal security audits, let alone independent audits like those required for information security certifications from the International Organization for Standardization³³ or the American Institute of Certified Public Accountants.³⁴ ExamSoft’s sole data protection documentation comes from its privacy policy, which addresses the topic, in its entirety, by stating:

ExamSoft takes reasonable precautions to protect your personal data from loss, misuse and unauthorized access, disclosure, alteration, and destruction. No method of transmission over the Internet, or method of electronic storage is 100% secure, however. Therefore, ExamSoft cannot guarantee its absolute security.³⁵

III. Conclusion

²⁹ *NY Remote Bar FAQs*, *supra* note 18, at 5.

³⁰ Press Release, ExamSoft Worldwide, Inc. & ProctorU, ExamSoft and ProctorU Embark on New Partnership to Deliver Industry’s First Offline Version of Online Proctoring into Secure Assessments (Mar. 18, 2019), <https://www.proctoru.com/industry-news-and-notes/examsoft-proctoru-embark-partnership-deliver-industrys-first-offline-version-online-proctoring-secure-assessments>.

³¹ Lawrence Abrams, *ProctorU Confirms Data Breach After Database Leaked Online*, BleepingComputer (Aug. 9, 2020, 2:02 PM), <https://www.bleepingcomputer.com/news/security/proctoru-confirms-data-breach-after-database-leaked-online/>.

³² *Online Bar Exam Hearing*, *supra* note 11, at 16:55.

³³ *ISO/IEC 27001 Information Security Management*, Int’l Org. for Standardization, <https://www.iso.org/isoiec-27001-information-security.html> (last visited Dec. 14, 2020).

³⁴ *System and Organization Controls: SOC Suite of Services*, Am. Inst. of Certified Pub. Accountants, <https://www.aicpa.org/SOC> (last visited Dec. 14, 2020).

³⁵ *Privacy Policy*, *supra* note 16.

I have been a proud member of the New York Bar for my entire legal career, but I am embarrassed at how we have treated recent law school graduates. I am embarrassed that instead of seeing the COVID-19 pandemic as a chance to revisit how the bar exam has failed to live up to its stated purpose,³⁶ we chose to prop up the discredited remains of this unnecessary test with biased, broken, and invasive surveillance tools. We should not hold onto an antiquated and racist relic of the past³⁷ merely because there is no consensus on an alternative. Until there is an evidence-based solution, we need to suspend the bar exam and allow diploma privileges.

³⁶ See Brit Benjamin, Opinion, *Data Point: The Bar Exam Does Not Protect the Public*, Law.com: The Recorder (Apr. 27, 2020, 11:11 AM), <https://www.law.com/therecorder/2020/04/27/the-bar-exam-debate/>.

³⁷ Valerie Strauss, *Why This Pandemic Is a Good Time to Stop Forcing Prospective Lawyers to Take Bar Exams*, Wash. Post (July 13, 2020, 2:45 PM), <https://www.washingtonpost.com/education/2020/07/13/why-this-pandemic-is-good-time-stop-forcing-prospective-lawyers-take-bar-exams/> (explaining that “the very origin of the bar exam is rooted in anti-blackness”).