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Supreme Judicial Court of Massachusetts

SJC-12115
APPEALS COURT DOCKET NO. 2015-P-0770
DAR-24029

COMMONWEALTH OF MASSACHUSETTS,
Plaintiff–Appellant,

v.

VICTOR ROSARIO,
Defendant-Appellee

On Appeal from a Judgment of the Middlesex County Superior Court

BRIEF OF AMICI CURIAE, NEW ENGLAND INNOCENCE PROJECT, THE INNOCENCE PROJECT, INC., AND THE BOSTON COLLEGE INNOCENCE PROGRAM, IN SUPPORT OF DEFENDANT-APPELLEE, VICTOR ROSARIO

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INTEREST OF AMICI CURIAE

The New England Innocence Project (NEIP) is a charitable trust and a 501(c)(3) tax-exempt organization that provides pro bono legal services to identify, investigate, and exonerate persons who have been wrongly convicted and imprisoned in New England states. In addition to its work on behalf of individual prisoners, NEIP also seeks to raise public awareness of the prevalence, causes, and costs of wrongful convictions, and advocates for legal reforms that will reduce the risk they occur and will hasten the identification and release of innocent prisoners.

The Innocence Project, Inc. is a not-for-profit organization providing pro bono legal services and other resources to indigent prisoners whose innocence may be established through post-conviction DNA testing. While perhaps best known for its work using DNA to free the wrongly convicted, the Innocence Project is also dedicated to preventing future wrongful convictions by researching the causes of wrongful convictions, pursuing legislative, judicial, and administrative reform initiatives designed to enhance the truth-seeking functions of the criminal justice system, and engaging in direct litigation.

The Boston College Innocence Program (BCIP) is a clinical legal educational program at Boston College Law School in which faculty and students study the causes and harms of wrongful convictions, provide pro bono investigative and legal services to indigent prisoners seeking to prove their factual innocence, and engage in research, education, and public policy initiatives to remedy and prevent erroneous convictions.[1]

The experience of amici and our clients demonstrates the multitude of ways in which a single piece of flawed evidence can mislead investigators, contaminate other evidence, and influence the jury's evaluation of all of the evidence. Amici have an interest in the methods of judicial review that enable courts to recognize and remedy wrongful convictions.

INTRODUCTION

To date, the work of amici and similar organizations has led to the exoneration of 347 people through post-conviction DNA testing who were

[1] In 2014, two former BCIP law student externs were placed under the supervision of Attorney Lisa Kavanaugh at the CPCS Innocence Program and assisted her representation of Mr. Rosario. Professor Beckman and the BCIP Clinic student contributing to this brief were not part of Rosario's legal team.

wrongfully convicted of crimes they did not commit.[2] Ten of these innocent people were wrongfully convicted in Massachusetts, and collectively they served over 125 years in prison for crimes they did not commit.[3] The DNA exoneration cases, however, are just the tip of the wrongful conviction iceberg. The National Registry of Exonerations lists 1900 cases -- including 45 Massachusetts cases -- where wrongful conviction was proved either by DNA testing or by other evidence.[4]

Although Mr. Rosario's case is among the majority of wrongful convictions where the new evidence casting doubt on the conviction is not DNA evidence, it involves two of the leading causes of wrongful convictions seen in the DNA exoneration cases --

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[2] See The Innocence Project, *DNA Exonerations in the United States*, INNOCENCE PROJECT, http://www.innocenceproject.org/dna-exonerations-in-the-united-states/ (last visited Oct. 21, 2016).

[3] THE NATIONAL REGISTRY OF EXONERATIONS, http://www.law.umich.edu/special/exoneration/Pages/detaillist.aspx (last visited Oct. 20, 2016). The Massachusetts DNA exonerees, and the years they served in prison for crimes they did not commit, are as follows: Ulysses Rodriguez Charles (17 years); Ronjon Cameron (16 years); Stephan Cowans (5.5 years); Dennis Maher (19 years); Neil Miller (9.5 years); Marvin Mitchell (7 years); Anthony Powell (12 years); Eric Sarsfield (9.5 years); Eduardo Velasquez (12.5 years); and Kenneth Waters (17.5 years). *Id.*

[4] *Id.*

faulty forensics[5] and a false confession[6] -- and it is like the majority of DNA exoneration cases in that it involves more than one causal factor associated with wrongful convictions.[7] Indeed, to date, there have been 31 exonerations in cases like Mr. Rosario's involving faulty arson science but no DNA.[8] Six of those cases also involved a false confession.[9]

This case presents the Court with an opportunity to further illustrate how a judge deciding a Rule 30(b) motion for a new trial alleging that new science casts doubt on the justice of a conviction should evaluate "whether the new evidence would probably have been a real factor in the jury's deliberations." *Commonwealth v. Ellis,* 475 Mass. 459, 477-80 (2016). Amici urge this Court to clarify that Rule 30(b) requires judges to shine the light of newly discovered scientific research on all of the evidence as it did in *Ellis* and *Commonwealth v. Cowels*, 470 Mass. 607

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[5] *See* The Innocence Project, *supra* note 2 (stating that the misapplication of forensic science was seen in 46% of DNA exonerations in the United States).

[6] *See id.* (stating that 29% of DNA exonerations in the United States involved false confessions).

[7] EMILY WEST AND VANESSA METERKO, DNA EXONERATIONS, 1989-2014: REVIEW OF DATA AND FINDINGS FROM THE FIRST 25 YEARS 18 (2016).

[8] THE NATIONAL REGISTRY OF EXONERATIONS, *supra* note 3.

[9] *Id.*

(2015), in order to recognize and remedy wrongful convictions. Amici respectfully urge the Court to affirm the ruling below for the reasons given by the motion judge and for the additional reasons set out below.

STATEMENT OF THE CASE AND STATEMENT OF FACTS

Amici adopt the Statement of the Case and Statement of Facts set forth in Mr. Rosario's brief at pages 5-28.

SUMMARY OF ARGUMENT

1. Mr. Rosario is entitled to a new trial because newly discovered fire science undermines the prosecution's case against him and is consistent with his innocence. The motion judge concluded that Rosario was not entitled to a new trial "on the basis of the fire science alone" because his confession was "consistent with and corroborated the fire science and eyewitness testimony at trial."[10] However, this conclusion stems from her failure to ask whether the new fire science "would probably have been a real

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[10] Memorandum of Decision and Order on Defendant's Motion for New Trial, *Commonwealth v. Rosario*, No. 82-2399-2407 (Sup. Ct. Middlesex Cty., July 7, 2014) (Memo 88, RA436); (Memo 87, RA435).

factor in the jury's deliberation,"[11] and to consider how it casts doubt on all of the evidence, inferences, and arguments the prosecution used to support its faulty arson theory.[12] (Page 11)

Newly discovered fire science expert testimony contradicts the assumptions, methods, and conclusions of the prosecution's arson investigators. Jurors who heard expert testimony that the fire could not have been started by Molotov cocktails, as the prosecution alleged, most likely would have doubted the truthfulness or voluntariness of the statements Rosario signed alleging the fire started that way. Further, the jury likely would have believed Rosario's exculpatory explanation for what the eyewitness saw -- that he was attempting to rescue people from the fire -- rather than inferring, as the prosecution alleged, that the witness just missed seeing Rosario commit

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11 *Commonwealth v. Ellis*, 475 Mass. 459, 476-80 (2016) (question "not whether the verdict would have been different, but rather whether the new evidence would probably have been a real factor in the jury's deliberations, citing *Commonwealth v. Cowels*, 470 Mass. 607 (2015)).

12 *Ellis*, 475 Mass. at 476-80 (2016) (citing *Cowels*) (question "not whether the verdict would have been different, but rather whether the new evidence would probably have been a real facctor in the jury's deliberations").

arson.[13] The new fire science evidence also contradicts the prosecutor's closing arguments that "there's no question there was arson here," that the fire experts "could positively be sure where the fire originated," and that the arson investigation provided "independent corroboration" of details about Molotov cocktails in Rosario's signed statements to the arson investigators.[14] (Page 13)

A wealth of social science research, as well as empirical and case studies of DNA exonerations and other wrongful convictions reveal that faulty forensics can -- and do -- compromise all aspects of an investigation and trial, leading investigators to overlook exculpatory evidence and draw incorrect inculpatory inferences from neutral information. The risk of contamination is especially high in forensic disciplines such as arson investigation that rely on subjective judgment. This is particularly true where, as here, the very law enforcement investigators who interrogate suspects, interview witnesses, and participate in other aspects of the investigation are also the "forensic experts" who determine whether or

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13 (Memo 93, RA 441).

14 Trial Transcript, *Commonwealth v. Rosario*, No. 82-2399-2407 (Tr., VR764); (Tr., VR777).

not a fire was deliberately set. The combined effect of the faulty but seemingly scientific forensic conclusions, the tainted but seemingly independent corroborative evidence, and the unconscious tendency to overlook or misunderstand exculpatory evidence that does not fit with the faulty forensic theory creates a perfect storm for wrongful conviction. (Page 18)

Judging the impact of newly discovered scientific evidence "alone,"[15] in a piecemeal fashion, with blinders to its contaminating effects on the rest of the evidence, risks leaving a wrongful conviction in place. To avoid this risk in future cases, this Court should affirm the order granting Mr. Rosario a new trial and clarify that the newly discovered arson science casts doubt on the justice of Rosario's convictions because it could have affected the jury's deliberations on the entirety of the prosecution's case against him, as well as on his exculpatory explanation of what the neutral eyewitness saw. (Page 27)

2. Modern social science research shows that innocent people falsely confess to crimes they did not commit, and sometimes do so even in the absence of

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[15] (Memo 88, RA436).

police misconduct. We now know that coercive police interrogation techniques -- including techniques enshrined in the Reid method used in this case -- enhance the likelihood of false confessions, especially where, as here, they are used on someone in a state of mental vulnerability. The Court should affirm the trial court's conclusion that Mr. Rosario was entitled to a new trial because, had a jury known -- as modern understanding of arson science makes clear today -- that the Molotov cocktail theory proffered by the arson investigator was impossible, it would likely have found Mr. Rosario's "confession" to be unreliable. The Court should further affirm that the social science research concerning false confessions is "newly available" and that, taken together with all of the circumstances, supported the court's order for a new trial. (Page 31)

ARGUMENT

Amici urge this Court to affirm the ruling below granting Mr. Rosario a new trial. The motion court's conclusion that Mr. Rosario's vulnerable mental state

-- either alone,[16] or in combination with the new evidence about current fire science[17] or false confessions[18] -- casts doubt on the voluntariness of his statements and on the justice of his conviction. That conclusion is well supported by the extensive findings set out in the court's 99-page Memorandum of Decision and is consistent with this Court's decisions interpreting Rule 30(b). *See, e.g., Commonwealth v. Epps*, 474 Mass. 743, 767-78 (2016)(new trial required "where there is a substantial risk of miscarriage of

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[16] (Memo 92-93, RA440-441) (newly discovered delirium tremens diagnosis could cause a reasonable fact-finder to conclude that defendant's statement was involuntary, which probably would have been a real factor in the jury's deliberations, casting real doubt on the justice of the conviction); (Memo 96, RA444) (even if the delirium tremens diagnosis is not newly discovered, Mr. Rosario "is nevertheless entitled to a new trial because his [attorney's] failure to raise the evidence sooner created a substantial risk of a miscarriage of justice.").

[17] (Memo 93 n.52, RA441) ("Envisioning a trial that involves the exclusion of the defendant's confession in combination with the admission of the newly discovered fire science evidence casts even greater doubt on the justice of the defendant's conviction.").

[18] (Memo 98, RA446) ("A reasonable fact-finder could therefore conclude that the defendant's confession was involuntary based on the evidence regarding coercive interrogation techniques, taken in combination with the totality of the circumstances."); (Memo 98 n.56, RA446) ("[E]ven if the evidence that the defendant was experiencing delirium tremens at the time of confession is insufficient, alone, to entitle the defendant to a new trial, that evidence, in combination with the evidence concerning interrogation techniques, satisfies the defendant's burden.").

justice ... whether the source of the deprivation is counsel's performance alone or the inability to make use of relevant new research findings alone, or the confluence of the two"); *Ellis*, 475 Mass. at 481 (2016)(viewing "newly discovered evidence together with the totality of the evidence presented at trial" shows new evidence would have been a real factor in jury's deliberations); *Commonwealth v. Brescia*, 471 Mass. 381, 396 (2015)(new trial required by "extraordinary confluence of factors" hampering fairness of defendant's trial). In short, the court's findings of fact are not "clearly erroneous" and its order granting Mr. Rosario's motion for a new trial is not the result of a "significant error of law or other abuse of discretion." *Id.* at 387 (citing *Commonwealth v. Wright*, 469 Mass. 447, 461 (2014)).

In addition to affirming the holding of the motion judge, Amici urge this Court to affirm the order granting Mr. Rosario a new trial for additional reasons as set forth below.

I. MR. ROSARIO IS ENTITLED TO A NEW TRIAL BECAUSE NEWLY DISCOVERED SCIENTIFIC EVIDENCE CASTS DOUBT ON THE JUSTICE OF HIS CONVICTIONS.

In affirming the motion judge's order granting Mr. Rosario a new trial, this Court should clarify that a new trial would also have been warranted on the ground that the newly discovered fire science casts doubt on the justice of his convictions. The motion judge's findings that newly discovered fire science "'differ[ed] significantly' from and contradict[ed] the principles that provided the bases for the fire science evidence at trial"[19] would have justified a new trial order in and of themselves. However, the judge mistakenly concluded otherwise, reasoning that there was no substantial risk that the jury would have reached a different conclusion because Rosario's confession was "consistent with and corroborated the fire science and eyewitness testimony at trial."[20] This part of the motion judge's analysis is inconsistent with this Court's instructions to "decide[] not whether the verdict would have been different, but rather whether the new evidence would probably have been a real factor in the jury's

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19 (Memo 87, RA435).

20 (Memo 87, RA435).

deliberations." *Ellis*, 475 Mass. at 476-80; *Cowels*, 470 Mass. at 623 ("Where we determine that newly discovered evidence likely would have functioned as a real factor in the jury's deliberations...we may not then assess whether the jury still would have reached the same conclusion."). Moreover, in concluding that Mr. Rosario was not entitled to a new trial "on the basis of the newly discovered fire science evidence alone,"[21] the motion judge failed to consider what impact that evidence might have on the jury's consideration of the rest of the evidence as this Court demonstrated in *Ellis* and *Cowels*.

A. Newly Discovered Scientific Evidence Would Have Been A Real Factor In The Jury's Deliberations On The Evidence As A Whole.

According to the motion judge's findings, the newly discovered fire science in this case showed that the arson investigators "operated under certain misconceptions that were generally accepted at the time" and "did not arrive at their conclusions with respect to the cause and origin of the fire according to proper fire science principles."[22] Having reached

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[21] (Memo 88, RA436).

[22] (Memo 83, RA431); (Memo 85, RA433). Molotov cocktails made out of twelve-ounce beer bottles would not have contained enough fuel to burn more than ten

the flawed conclusion that the fire was started using accelerants at multiple points of origin on the first floor, the investigators did not investigate other areas of the building or other possible causes such as candles or a space heater in the living room. They "did not examine any debris other than in the two areas they had identified" and did not take notes or seek evidence from other areas of the building.[23] The evidence from the scene and the results of laboratory testing "did not confirm the presence of flammable liquid," and investigators found no thick bottle pieces or wick fragments evidencing the remains of Molotov cocktails.[24] The investigators' reliance on outmoded beliefs "to support their theory of the presence of a flammable liquid was therefore erroneous."[25]

A jury aware of current science showing that the cause and origin of the fire could not be determined would have rejected the prosecutor's closing argument that they could be "positively sure where the fire

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seconds, which would not have been long enough to ignite the building's wooden floors or stairs. (Memo 42, 46; RA390, 394).

[23] (Memo 85, RA433).

[24] (Memo 86, RA434).

[25] (Memo 87, RA435); (Memo 40, RA388).

started" and that "there were two points of origin."[26] Indeed, a prosecutor aware of the newly discovered evidence would not have been able to argue, as the prosecutor did here, that "there's no question there was an arson here." *See Ellis*, 475 Mass. at 478 (considering how different counsel's closing argument would have been if he had known of the newly discovered evidence). Where, as here, newly discovered scientific evidence places into question crimes or elements thereof that the prosecutor told the jury were not in question, it is impossible to conclude that new evidence would not have been a real factor in the jury's deliberations.

The court also erred in failing to consider how the new arson science could have undermined the jury's confidence not only in the conclusions of the arson experts but in their investigation as well. *See Ellis*, 475 Mass. at 479 (newly discovered evidence can diminish jurors' confidence in the "integrity and thoroughness" of an investigation, "caus[ing] them to question the reliability of some of the evidence

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[26] The prosecutor told the jurors in closing that "there's no question there was an arson involved here," and that the "fire experts" found "two separate points of origin; that they could positively be sure where the fire originated." (Tr., VR764).

presented by the prosecution"). The judge was correct to find that "without the defendant's confession the newly discovered fire science evidence casts real doubt on the justice of the conviction,"[27] but she failed to recognize that the reverse is possible as well: if the jurors disbelieved the arson investigators' Molotov cocktail theory, they would likely have disbelieved those admissions in Rosario's "confession" as well.

This is particularly true given that the same arson investigators who devised the discredited Molotov cocktail theory also conducted the interrogation.[28] Hearing current arson experts fully debunk the Molotov cocktail theory would have enabled jurors to see how this theory tainted the arson

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[27] (Memo 95 n.54, RA443).

[28] Lowell police department arson investigator Harold G. Waterhouse and Lieutenant William Gilligan of the Lowell fire department arson squad investigated the fire scene and testified as arson experts at trial. (Memo 6, RA354). Inspector Waterhouse first mentioned Mr. Rosario to the Lowell police and he exchanged information with them leading to Mr. Rosario's arrest. (Memo 9-11, RA357-359). Inspector Waterhouse and Lieutenant Gilligan were also the ones who obtained Mr. Rosario's signed "confession." (Memo 11, RA359). Waterhouse conducted the interrogation in his office in the arson unit and Waterhouse typed up the statements that Rosario eventually signed. (Memo 11-12, RA359-360).

investigators' questioning of Rosario and corrupted the statements they drafted for him to sign.[29]

Contrary to the motion judge's reasoning that Rosario's Molotov cocktail confession was independent corroboration of the prosecution's arson evidence, the prosecutor's closing argument appeared to suggest the opposite -- that the forensic testimony corroborated the voluntariness of Mr. Rosario's Molotov cocktail confessions.[30]

Finally, jurors who discounted the testimony of the prosecution's arson experts and questioned the reliability of Mr. Rosario's "confession" would have likely viewed the witness who observed Mr. Rosario next to the building with his empty hand raised in a different light than the one urged upon them by the

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[29] Jurors' concern in this regard would be heightened by their knowledge of Waterhouse's grand jury testimony about what the eyewitness, Mr. Evans, saw. Evans testified that he "did not see [Rosario] throw anything and did not see anything in his hand" (Memo 5, RA353), but Waterhouse testified before the grand jury that Mr. Evans saw Mr. Rosario "throwing an object through the window . . . [Evans] thought, a bottle." (Tr., VR396). Since the prosecution conceded at trial that Mr. Evans did not see Mr. Rosario throw a bottle into the building, a reasonable juror who believed Waterhouse had erroneously added facts supporting his Molotov cocktail theory to his account of Mr. Evans' statement could very well believe Waterhouse had done the same to the statements he typed up for Mr. Rosario to sign.

[30] (Tr., VR776-77).

prosecution. Rather than believe that the witness had just missed seeing Rosario hurl a Molotov cocktail into the front window as the prosecutor urged them to infer,[31] they could instead see the eyewitness's testimony as supporting Mr. Rosario's claim that he was trying rescue people from the building. *See Ellis*, 475 Mass. at 481 (newly discovered evidence casting doubt on conviction is not outweighed by eyewitness testimony placing the defendant at the scene when defendant has an exculpatory explanation for being there). On this point the motion judge agreed, holding that "[e]nvisioning a trial that involves the exclusion of the defendant's confession in combination with the admission of the newly discovered fire science evidence casts even greater doubt on the justice of the defendant's conviction."[32] In affirming the decision below, this Court should clarify that the order granting the new trial could have been based on the ground that the newly

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[31] The prosecutor argued in closing, "No, he doesn't see him throw it, actually throw it; but I suggest to you that is certainly a reasonable inference when you put the two acts together, two observations together, that that's what he saw. You don't actually have to see someone throw a ball to realize that somebody threw it." (Tr., VR787).

[32] (Memo 93 n.52, RA441).

discovered arson science would have been a real factor in the jury's deliberation regarding not only the faulty arson evidence but also all of the evidence, casting doubt on the justice of the conviction.

B. Faulty Forensic Evidence Can Cause A Cascade Of Errors Tainting Every Stage Of A Criminal Case Resulting In Wrongful Convictions.

Mr. Rosario's case fits within a pattern of wrongful conviction cases where flawed forensic assumptions, methods, and conclusions infected the entirety of a criminal investigation and trial. While there is no DNA evidence to exonerate Mr. Rosario, the lessons from DNA exoneration cases illustrate the likelihood that a wrongful conviction occurred here. Forty-six percent of the DNA exonerations to date have involved faulty forensics, twenty-nine percent have involved false confessions and over half have involved more than one contributing factor.[33] The lessons from the DNA exonerations and wrongful arson convictions, in combination with the scientific literature about the powerful effects of cognitive and confirmation bias in the forensic sciences and their contaminating effects, provide overwhelming support for affirming

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[33] The Innocence Project, *supra* note 2; West and Meterko, *supra* note 7.

the new trial order. The motion judge's findings about the newly discovered scientific evidence presented in this case further solidify the propriety of this result.

Studies show that erroneous forensic assumptions, methods, and conclusions can mislead law enforcement professionals, prosecutors, and jurors in powerful ways. The tendency of stakeholders to trust forensic evidence can contaminate the entire investigation and trial processes because of invisible cognitive biases, including confirmation bias.[34]

The influence of forensic conclusions on investigators is extremely powerful. When investigators rely on faulty forensics, they can develop a "tunnel vision" from the outset of the investigation,[35] setting off a cascade of further contamination, with a potentially unyielding focus on one suspect. Exculpatory evidence that does not conform to the established theory of the case gets dismissed. Inculpatory information is given inflated corroborative value and even neutral information is

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[34] Itiel E. Dror, Saul M. Kassin & Jeff Kukucka, *The forensic confirmation bias: Problems, perspectives, and proposed solutions*, 2 J. APPLIED RESEARCH IN MEMORY AND COGNITION 42, 45-47 (2013).

[35] *Id.* at 45.

interpreted in a way that supports the incriminating facts. The result is an "investigative echo chamber."[36]

The tendency of jurors to have blind faith in the findings of forensic science makes it especially powerful. "Lay jurors tend to give considerable weight to 'scientific' evidence when presented by 'experts' with impressive credentials."[37] A 1987 survey of recently discharged jurors serving on criminal cases that resulted in convictions found that, to juries, forensic experts are the most persuasive trial witnesses.[38] Approximately one-quarter of the surveyed jurors indicated that they would have acquitted had no scientific evidence been presented.[39] The research resulted in a finding that "the [mere] presence of forensic science evidence, regardless of the certainty with which it connects the

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[36] *Id.*

[37] *See, e.g.*, *Reed v. State*, 391 A.2d 364, 370 (Md. 1978).

[38] Tara Marie La Morte, *Sleeping Gatekeepers: United States v. Llera Plaza and the Unreliability of Forensic Fingerprinting Evidence Under Daubert*, 14 ALB. L.J. SCI. & TECH. 171, 208 (2003) (citing Joseph L. Peterson et al., *The Uses and Effects of Forensic Science in the Adjudication of Felony Cases*, 32 J. FORENSIC SCI. 1730, 1748 (1987)).

[39] *Id.* at 208-09.

defendant with the crime, is predicted to result in higher rates of conviction."[40]

Cases involving faulty forensics are especially susceptible to contamination through confirmation bias. A confirmation bias "snowball effect" can flow in two directions.[41] Forensic evidence can be *influenced*, such as when a fire investigator is affected by knowledge of the suspect's arrest or confession, and it can also be *influencing*, leading investigators to miss or misunderstand evidence inconsistent with faulty forensic beliefs. In both directions, the result is the same: evidence is tainted and its reliability is diminished.[42]

The "bias snowball effect" that occurs when forensic examiners are exposed to other aspects of the case -- such as investigative reports, confessions, eyewitness testimony, and preceding forensic results -- is strengthened as more evidence is contaminated by the bias. It then proceeds to contaminate other lines

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40 Joseph L. Peterson et al., *The Uses and Effects of Forensic Science in the Adjudication of Felony Cases*, 32 J. FORENSIC SCI. 1730, 1742 (1987).

41 Itiel E. Dror, *Cognitive Bias and Its Impact on Expert Witnesses and the Court*, 51 THE JUDGES' JOURNAL 4, 4-5 (2015).

42 *Id.*

of evidence.[43] For example, a fingerprint analyst may be told, prior to comparing a latent print with a known source, that an eyewitness previously identified the source as the perpetrator. Scientific experiments have shown how this foreknowledge influences the analysts' conclusions -- more often than not leading the analyst to find a match. When the fingerprint match is presented at trial, it misleadingly appears to be the result *solely* of the fingerprint test, masking the influence of the eyewitness.[44] As a result, the eyewitness evidence is essentially presented twice: directly, through the witness's own testimony, and indirectly, though its reverberation in the fingerprint results.[45] Because the biasing connections among various lines of evidence are not explained to the jury, innocent people are convicted.

Forensic disciplines that rely more on examiner judgment than on objective criteria -- such as fingerprint, handwriting, bite mark, and burn pattern analysis -- are especially vulnerable to biasing

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[43] *Id.* at 5.
[44] *Id.*
[45] *Id.*

influences.[46] The ambiguity of forensic indicators makes their interpretation highly vulnerable to the examiner's predeterminations and to any external information or theories to which the examiner has been exposed.[47]

C. Faulty Fire Investigation Evidence Creates A Particularly High Risk Of Infecting Other Lines Of Evidence, Resulting In A Cascade Of Errors.

Arson cases present a special risk of wrongful conviction because the conclusion that a fire was intentionally set -- *i.e.*, that a crime occurred -- is often one of the first investigatory conclusions. Because of their inceptive position, faulty fire investigations are primed to contaminate every subsequent element of the case.

For decades, the primary "instrument" of arson science was the investigator's subjective judgment, with few objective tools or tested methodologies in place. Arson investigations and conclusions were

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[46] Itiel E. Dror, *Cognitive bias in forensic science*, McGraw-Hill Yearbook of Sci. & Tech., 43, 44 (2012).

[47] *Id.*

extremely vulnerable to the corrupting effects of cognitive bias.[48]

After Mr. Rosario's conviction in the early 1980s, there was a sea change in the field of arson science. Specifically, visible physical evidence such as "pour patterns" and "deep charring," once interpreted as telltale signs of the presence of accelerants, became widely understood by fire scientists and investigators to be equally consistent with accidental fires. This new understanding has led to exonerations in arson cases where faulty arson forensics during the investigation and trial led to a cascade of errors resulting in wrongful convictions.[49]

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[48] Paul Bieber, *Anatomy of a Wrongful Conviction: Sentinel Event Analysis in Fire Investigation*, The Arson Research Project, at 5.

[49] There have been 31 arson exonerations involving false or misleading forensic evidence. Of those cases, six also involved a false confession. The National Registry of Exonerations, *supra* note 3. *See, e.g. Souliotes v. Hedgpeth*, No. 1:06-CV-00667 AWI, 2012 WL 1458087, at *17 (E.D. Cal. Apr. 26, 2012)(vacating a triple arson-murder conviction based on new evidence of faulty arson forensics and "its combined effect" with the rest of the evidence); *United States v. Hebshie*, 754 F. Supp. 2d 89 (D. Mass. 2010)(vacating arson conviction under 28 U.S.C. 2255 because counsel was constitutionally ineffective in failing to challenge faulty forensic evidence relating to the cause and origin of the fire); *People v. Hobley*, 696 N.E.2d 313 (Ill. 1998) (defendant pardoned based on actual innocence following conviction and death sentence for fire that killed seven people,

United States v. Hebshie, 754 F. Supp. 2d 89 (D. Mass. 2010), is illustrative. The district court (Gertner, J.) vacated Hebshie's federal arson conviction under 28 U.S.C. § 2255 due to his attorney's ineffectiveness in failing to challenge the faulty forensic evidence the prosecution used to prove the cause and origin of the fire.[50] The charges against Hebshie were subsequently dismissed.[51] The district court found that faulty forensic assumptions led the government's "cause and origin" investigator to believe erroneously that the fire started in Hebshie's first floor convenience store.[52] An alert by an accelerant-sniffing dog seemed to corroborate his faulty belief,[53] as did a test from that area indicating the presence of a light petroleum distillate, which the district court later determined was consistent with many everyday products one would expect to find in a convenience store.[54] Because the investigator thought he knew where the fire started,

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including his wife and child, where fire investigation involved serious police and prosecutorial misconduct).

[50] 754 F. Supp. 2d at 95.

[51] Dismissal of Indictment, *United States v. Hebshie*, No. 1:02-cr-10185 (D. Mass. June 20, 2011), ECF No. 192.

[52] *Hebshie*, 754 F. Supp. 2d at 96.

[53] *Id.* at 97.

[54] *Id.*

he did not investigate or collect samples from any other area of the building.[55] Crediting fire science expert John Lentini's testimony that the prosecution's arson theory was "scientifically impossible,"[56] and citing a host of faulty forensic events -- including flawed investigative methods, erroneous "cause and origin" testimony, inadequate sampling and laboratory testing, and the handler's "almost mystical account" of his alert dog's capabilities[57] -- the district court concluded that without the faulty forensic evidence and the defective investigation that resulted from it, "[t]here would have been no case at all."[58]

The district court ended its opinion in *Hebshie* recognizing that one thing wrongful conviction cases "necessarily have in common is that each were presided over by a judge, an appellate court, and typically had post-conviction habeas review... One would hope that with the announcement of every exoneration, the judges across whose desks these cases passed would pause to

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55 *Id.* at 96-97.
56 *Id.* at 108-09.
57 *Id.* at 111-22.
58 *Id.* at 127.

ask, 'what can we do to make sure that this doesn't happen again?'"[59]

D. Judging The Impact Of New Science Cannot Be Limited To Forensic Evidence Alone Because Faulty Forensics Have Been Shown To Contaminate Other Lines of Evidence Through A Cascade Of Errors.

The lessons of the DNA and arson exoneration cases illustrate that post-conviction proof of factual innocence can be elusive and is not evident when evidence is evaluated bit by bit, in a piecemeal fashion.[60] Post-exoneration studies of DNA cases reveal that more than half of these innocent people were convicted based on multiple causes that combined together to produce the erroneous conviction. In many of these cases, faulty forensic assumptions led to a cascade of errors, creating a false impression of corroboration that gave the lines of evidence a misleadingly persuasive sense of consistency.[61] Reviewing courts upheld these erroneous convictions because they evaluated each factor or new piece of

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[59] *Id.* at 128 (citing L. Hammond, *The Failure of Forensic Science Reform in Arizona*, 93 JUDICATURE 227, 2 (2010)).

[60] Stephanie Roberts Hartung, *Missing the Forest for the Trees: Federal Habeas Corpus and the "Piecemeal Problem" in Actual Innocence Cases*, 10 STAN. J. OF CIV. RTS. & CIV. LIB. 56, 56, 89-91 (2015).

[61] MARVIN ZELMAN & JULIA CARRANO, WRONGFUL CONVICTION AND CRIMINAL JUSTICE REFORM: MAKING JUSTICE 16 (2013).

evidence individually against the remaining inculpatory evidence but failed to consider whether the confluence or cumulative effect of multiple factors undermined the accuracy of the verdict.[62] A "piecemeal" method of review prevents reviewing courts from recognizing the pervasive influence false evidence has on other aspects of the case. In contrast, when these seemingly independent lines of evidence are examined together, their influence on each other and the cumulative effects can be seen.

The investigation and trial of Mr. Rosario share traits in common with the findings in the cases discussed above. Newly discovered evidence suggests that arson investigators mistakenly relied on a flawed theory that the fire was started with Molotov cocktails and had multiple points of origin. This mistaken premise led them to put these facts in a written statement that they prepared for Mr. Rosario

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[62] Hartung, *supra* note 60, at 60-61; Dror et al., *supra* note 34, at 50; BRANDON GARRETT, CONVICTING THE INNOCENT: WHERE CRIMINAL PROSECUTIONS GO WRONG 183 (2011); Nancy King, *Judicial Review: Appeals and Postconviction Proceedings*, EXAMINING WRONGFUL CONVICTIONS: STEPPING BACK, MOVING FORWARD 221 (Allison Redlich et al., eds., 2014) ("Harmless error rules and deferential standards of review also make it difficult to secure postconviction relief" because judges conclude that issue raised in the motion "would not have made any difference in the jury's decision.").

to sign. It also influenced the prosecution's interpretation of originally neutral eyewitness testimony. Expectation and confirmation biases led investigators to undervalue evidence that did not fit their arson theory, and to draw unwarranted incriminating inferences from neutral evidence.

This Court has held that the impact of scientific advances on a jury's deliberation should be considered holistically, as opposed to piecemeal, on a motion for new trial and should now clarify that this is the proper approach for reviewing courts to employ. In *Cowels*, the Court held that "the proper approach to assessing a motion for a new trial on the basis of newly discovered evidence" is for the court to consider "whether, in light of 'a full and reasonable assessment of the trial record,' the evidence at issue 'would have played an important role in the jury's deliberations and conclusions.'" *Id.* at 623-24 (quoting *Commonwealth v. Tucceri*, 412 Mass. 401, 414 (1992)). The evidence as a whole is significant, "because it provides the context within which to assess whether the newly discovered evidence would have been a real factor in the jury's deliberations." *Id.* at 623.

In *Cowels*, this Court granted a motion for new trial based on new DNA evidence excluding the defendants as contributors to blood on bathroom towels that the Commonwealth alleged had corroborated the testimony of a witness incriminating the defendants in a murder. *Id.* at 608. The Court reasoned that the new evidence discrediting the prosecution's evidence would have been a real factor in the jury's deliberations, not only on whether the towels were used in the crime, but also on the credibility of that witness. *Id.* at 623-24.

The Court's consideration of how the new scientific evidence might have impacted not only the physical evidence but also the jury's credibility assessments "'preserv[es], as well as it can in the circumstances, the defendant's right to the judgment of his peers,' since it ensures that the court's analysis turns on 'what effect the omission might have had on the jury' rather than on 'what ... impact the late disclosed evidence has on the judge's personal assessment of the trial record.'" *Id.* at 623; *see also Ellis*, 475 Mass. at 459.

The critical lessons from the exoneration cases described above, along with other new scientific

literature, provide overwhelming support for granting Mr. Rosario a new trial on the ground that newly discovered arson science would have been a real factor in the jury's consideration not only of the arson forensics but of all of the evidence in the case.

II. EVOLVING RESEARCH ON FALSE CONFESSIONS CONSTITUTES "NEWLY AVAILABLE EVIDENCE" CASTING DOUBT ON THE RELIABILITY AND VOLUNTARINESS OF ROSARIO'S ALLEGED CONFESSION AND THE JUSTICE OF HIS CONVICTIONS.

The false confession risk factors identified by recent social science research, together with the motion judge's findings about the totality of circumstances in this case, are sufficient to undermine the reliability of Mr. Rosario's purported confession. However, these factors must also be viewed in light of the faulty fire investigation discussed above. Had Mr. Rosario been able to present favorable evidence directly rebutting the Commonwealth's Molotov cocktail theory at trial, the jury very likely would have viewed the confession evidence more skeptically and would have given more weight to the coercive and suggestive nature of the arson investigators' interrogation. In sum, the new understanding of arson science that has emerged since

Rosario's trial reveals the signed "confession" for what it was: a complete fallacy.

A. Evolving Social Science Research On False Confessions Constitutes Newly Available Evidence.

In a motion for a new trial based on new evidence, a defendant must show that the evidence is either "newly discovered" or "newly available" and that it casts real doubt on the justice of the defendant's conviction. *Commonwealth v. Sullivan*, 469 Mass. 340, 349-51 & n.6 (2014). "Newly available evidence" includes evidence that "was unavailable at the time of trial" because it "had not yet...gained acceptance by the courts." *Id.; Cowels*, 470 Mass. at 615-17 (considering DNA test "newly available" where, though technically available at the time of trial, it was considered only experimental then and became admissible only after trial); *see Epps*, 474 Mass. at 766 ("[I]f the trial were conducted today, it would be manifestly unreasonable for counsel to fail to find and retain a credible expert given the evolution of the scientific and medical research [relating to shaken baby syndrome.]").

When Rosario was tried in 1983, research on false confessions had not made the significant strides that

it has as of today. Recording of police interrogations was not mandated in any jurisdiction until 1985,[63] and the study of false confessions did not begin in earnest until over a decade later. The first research paper on this topic to attract significant attention, *The Decision to Confess Falsely*,[64] was published in 1997, fourteen years after Mr. Rosario's trial. And as this Court recognized in 2004, "the research [was] still hotly debated and 'not yet ready for prime time.'" *Commonwealth v. DiGiambattista*, 442 Mass. 423, 438 (2004).

By 2010, however, the research on police-induced false confessions was in fact "ready for prime time." It was then that the American Psychological Association published its landmark whitepaper on the subject, *Police-Induced Confessions: Risk Factors and*

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[63] To date, nineteen states, the District of Columbia, and over 450 police departments have adopted recording rules. See THOMAS P. SULLIVAN, NAT'L ASS'N OF CRIMINAL DEF. LAWYERS, COMPENDIUM: ELECTRONIC RECORDING OF CUSTODIAL INTERROGATIONS (2014); The Justice Project, *Electronic Recordings of Police Interrogations: A Policy Review*, http://web.williams.edu/Psychology/Faculty/Kassin/files/Justice%20Project(07).pdf.

[64] Richard J. Ofshe & Richard A. Leo, *The Decision to Confess Falsely: Rational Choice & Irrational Action*, 74 DENV. U.L. REV. 979 (1997).

Recommendations.[65] State courts have since acknowledged that the science now qualifies as "newly available" for purposes of granting a new trial or other post-conviction relief.[66]

Indeed, as recently as 2014, this Court noted that "the state of the research on false confession has progressed significantly" since 2007. *Commonwealth v. Hoose*, 467 Mass. 395, 420 (2014).[67] In this context, the Court recognized that expert testimony on this research may be appropriate in a case where there is a direct attack on the veracity of the statements made to the police, and where some of the common false confession factors are present. *Id.*

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[65] Saul M. Kassin, et al., *Police-Induced Confessions: Risk Factors and Recommendations*, 34 J. LAW & HUM. BEHAV. 3 (2010).

[66] *See, e.g.*, *State v. Perea*, 322 P.3d 624, 640-44 (Utah 2013) ("[T]he science behind these studies of false confessions is sufficiently developed to meet the threshold of admissibility."); *accord State v. Hreha*, 89 A.3d 1223, 1230-33 (N. J. 2014); *State v. Cope*, 748 S.E.2d 194, 208-10 (S.C. 2013); *Terry v. Commonwealth*, 332 S.W.3d 56, 62 (Ky. 2010).

[67] Although the Court in *Hoose* determined it was not an abuse of discretion for the trial judge to exclude the expert's testimony given the particular facts in that case, it clarified that under appropriate circumstances -- *i.e.*, a case "in which a defendant attacks directly the veracity of his or her statement to the police and where several of the false confession factors thus far identified are present" -- expert testimony on false confessions "could be relevant to a defendant's case and helpful to a jury." 467 Mass. at 419-20.

at 419-20. Here, where both criteria are easily satisfied, the motion judge was well within her discretion in holding that the expert testimony to the effect that Rosario interrogators "engaged in interrogation techniques that are now considered conducive to eliciting a *false* confession from a criminal suspect, but, at the time of the interrogation, were generally used," was "newly discovered," and not merely cumulative of information available at the time of trial bearing on the *voluntariness* of the written statements.[68]

B. Modern Research Shows That Innocent People Confess To Crimes They Did Not Commit, Even In The Absence Of Extreme Police Behavior.

There is now scientific proof that people do, in fact, confess to crimes they did not commit, even in the absence of extreme police misconduct.[69] New social science research has identified an array of risk factors associated with false confessions that fall into two main categories: (i) personal or

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[68] (Memo 97-98, RA445-446) (emphasis added).

[69] Saul M. Kassin, *False Confessions: Causes, Consequences, and Implications for Reform*, 17.4 CURRENT DIRECTIONS IN PSYCH. SCI. 249, 249 (2008); Brandon L. Garrett, *The Substance of False Confessions*, 62 STAN. L. REV. 1051, 1083 (2010); Saul M. Kassin, *The Psychology of Confession Evidence*, 52.3 AM. PSYCHOLOGIST 221, 225 (1997).

dispositional risk factors and (ii) situational risk factors.[70] Personal or dispositional risk factors are inherent characteristics an individual holds that make the person more likely to be "rendered vulnerable to manipulation."[71] Common examples include age and mental impairment, personality disorders, mental illness, enduring personality traits (such as suggestibility and compliance), and actual innocence.[72] Situational risk factors, in contrast, are the circumstances in which the suspect finds himself, such as the identity of the investigators, the presence of absence of others in the room, the investigators' treatment of the suspect, and the location and duration of the interrogation.[73]

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[70] Kassin, *supra* note 65, at 4, 16-23.

[71] *Id.* at 16.

[72] *Id.* at 19-23.

[73] *Id.* at 16-19. The influence of these risk factors in producing false confessions recently garnered national attention with the case of Brendan Dassey, a 16-year-old intellectually impaired boy whose conviction for a murder and sexual assault was featured on the documentary television series "Making a Murderer." Following 11 years in prison, on August 12, 2016, a federal court found that Dassey's confession was false and granted him habeas corpus relief. The court stated: "repeated false promises, when considered in conjunction with all relevant factors, most especially Dassey's age, intellectual deficits, and the absence of a supportive adult, rendered Dassey's confession involuntary under the Fifth and Fourteenth Amendments." Decision and Order

The prevalence of these risk factors in exoneration cases involving false confessions is supported by the research of Professor Brandon Garrett. Of the 66 DNA exonerations involving false confessions that Garrett studied, 23 were juveniles and at least 22 were mentally impaired or mentally ill.[74] Sixty-one resulted from interrogations that took place for more than three hours.[75] All 66 waived their *Miranda* rights.[76]

Further, modern social science research has debunked the notion that a high level of detail supports the reliability of a confession.[77] In fact, in another study involving the review of 40 false confession cases, Garrett found that in 94% of them, the confessions contained specific, non-public information.[78] Given that DNA evidence has emerged and exonerated these individuals, it is clear that law enforcement contaminated these confessions.[79]

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at 88, *Dassey v. Dittman*, No. 14-CV-1310 (E.D. Wis. Aug. 12, 2016).

[74] Brandon Garrett, *Contaminated Confessions Revisited,* 101 VA. L. REV. 395, 400 n.16 (2014).

[75] *Id.* at 404.

[76] *Id.* at 402.

[77] *See id.* at 408, 419-20.

[78] *Id.* at 404, 410.

[79] *Id.* at 410.

Finally, modern research shows that a confession can have a defining impact on the direction of the investigation. Frequently, once a confession is made, the entire focus of the investigation becomes centered on the confessor, often to the exclusion of other highly probative evidence -- even exculpatory DNA results.[80] For example, in the Jeffrey Deskovic case, the defendant's confession included details that the detectives claimed only the killer would have known.[81] However, when DNA evidence later excluded the defendant as the source of the semen found in swabs taken from the victim's body, the police failed to investigate the possibility of a different perpetrator.[82] Instead, the district attorney argued that the teenaged victim -- who was not known to have sexual partners -- had been "sexually active" and "romantically linked to somebody else" (never identified).[83] Deskovic was ultimately exonerated when DNA testing connected the profile found inside the victim with a convicted murderer.[84]

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80 Kassin, *supra* note 65, at 23.
81 *See* Garrett, *supra* note 69, at 1054-57.
82 *Id.* at 1055.
83 *Id.*
84 *Id.* at 1056.

C. Applying Modern Research To This Case Casts Doubt On The Reliability Of Mr. Rosario's Confession And The Justice Of His Convictions.

Here, the motion judge correctly granted a new trial where the combination of flawed police interrogation techniques and Mr. Rosario's vulnerable mental state produced a confession matching what current science shows was a faulty forensic theory of how the fire started. Newly available social science research on false confessions casts doubt on the reliability and voluntariness of Rosario's alleged confession and on the justice of his conviction.

1. Mr. Rosario's mental vulnerability created a heightened likelihood of false confession.

The motion judge heard new evidence that at the time of Mr. Rosario's confession, he was suffering from acute alcohol-withdrawal delirium tremens that, according to medical experts, caused a "global disturbance of [his] cognition and orientation" and "acutely interrupted all of [his] brain's functions."[85] This "condition is marked by derangement of mental processes resulting in disorientation, a lack of awareness, confusion, and extreme behavioral and

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[85] Brief for Appellee at 4

perceptional disturbances," leaving "the individual experiencing them susceptible to suggestion and unable to process information reliably."[86]

The motion judge's determination that "evidence that [Rosario] was suffering from delirium tremens at the time of his confession supports a finding that he was incapable of giving a voluntary statement,"[87] and that a reasonable fact-finder hearing this evidence could conclude that Mr. Rosario's confession was involuntary are not clearly erroneous.[88] Importantly, the motion judge found that a reasonable fact-finder could reach this conclusion regardless of whether the evidence of delirium tremens was "newly discovered" or even whether it was the reason for Rosario's mental incapacity, since the evidence showed that Rosario was in a "state of [mental] vulnerability" -- "whether in the throes of an emotional outburst or catharsis" or "suffering from a psychosis" or "experiencing delirium tremens" -- and "a reasonable fact-finder could therefore conclude that [Mr. Rosario's] confession was involuntary based on the evidence regarding coercive

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[86] (Memo 55, RA403);(Memo 92, RA440).

[87] (Memo 95, RA 443).

[88] *Id.*

interrogation techniques, in combination with the totality of the circumstances."[89]

The circumstances of this case, as found by the motion judge, support affirmance on the alternative ground that a new trial is warranted because newly available research on false confessions would have been a real factor in the jury's deliberations on whether the facts contained in the prepared statements Rosario signed were true or false. At the time of his interrogation, Rosario suffered from distorted perception, judgment, memory, and ability to process information and was highly susceptible to suggestion.[90] Given what is now known about the risk mental illness creates in eliciting false confessions, it is likely that Rosario's personal risk factors at the time of his interrogation caused him to sign prepared statements that were false.

2. Rosario's innocence placed him at risk for false confession.

Mr. Rosario repeatedly asserted his innocence despite investigators' use of coercive interrogation tactics.[91] However counterintuitive to ordinary

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[89] (Memo 98, RA 446).
[90] *See* Brief for Appellee, *supra* note 85, at 10-12.
[91] *Id.*

assumptions, research shows that actual innocence is another risk factor for false confessions.[92] Innocent individuals, believing they have nothing to hide, often cooperate with the police and fail to adequately protect themselves by, for example, waiving their *Miranda* rights.[93] They "believe that truth and justice will prevail and that their innocence will become transparent to investigators, juries, and others."[94]

Mr. Rosario maintained his innocence throughout much of his interrogation,[95] insisting that he had not set the fire and had instead attempted to rescue its victims.[96] Indeed, as the prosecutor argued in closing:

> You've got a picture here of a person who denies it, denies and denies it, repeated denials. It's only over a long period of time, from sometime around eleven o'clock until sometime around three o'clock, when they finally wrap things up, a gradual process, wherein, he goes through a stage, a gradual process of acknowledging his involvement and guilt.[97]

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[92] Kassin, *supra* note 65, at 22-23.
[93] *Id.*
[94] *Id.* at 22.
[95] (Tr., VR692-VR697)(Memo 21, RA369).
[96] (Tr., VR692-VR697)(Memo 21, RA369).
[97] (Tr., VR774).

It was only after eight hours of interrogation, at a time when Mr. Rosario was in the throes of delirium tremens -- and it is reasonable to infer that his will was overborn -- that he ultimately signed the police-prepared confessions containing the now-debunked Molotov cocktail theory.

3. Investigators' use of elements of the Reid technique created an enhanced risk of false confession.

Situational risk factors, especially the manner in which the interrogation is conducted, can also heighten the likelihood of a false confession. Certain interrogation tactics embraced by the Reid technique of interviewing and interrogation are particularly problematic.[98]

Two of the most commonly used elements of the Reid technique are referred to as "minimization" and "maximization."[99] Minimization centers on attempting to lower the stakes of the situation in which the suspect finds him or herself.[100] The rationale behind this technique is that individuals, in general, are highly influenced by perceived reinforcements and

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98 *See* Kassin, *supra* note 65, at 7, 12-13; *see also* Garrett, *supra* note 74, at 428-29.
99 *See* Kassin, *supra* note 65, at 12.
100 *Id.*

implications suggesting leniency.[101] Maximization focuses on increasing the suspect's fear and the pressure he or she feels to confess by strongly asserting accusations of guilt, stating that such guilt can be proven by evidence already obtained, and refusing to accept denials.[102] In contrast to minimalization, maximization is designed to make the suspect feel hopeless and that confessing is inevitable.[103] Trickery and deception are common examples of maximization as well as keystones of many police manuals, long deemed legal by the United States Supreme Court and many state courts.[104]

In Mr. Rosario's case, although the interrogations were not recorded, there is evidence to support the conclusion that the interrogators used both minimization and maximization techniques.[105] For example, as suggested by the sequencing of the signed statements, the interrogators first minimized his involvement, suggesting that perhaps Rosario merely

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101 *Id.*

102 *Id.*

103 *Id.*

104 *Id.* *See also Frazier v. Cupp*, 394 U.S.731, 738-39 (1969); *Commonwealth v. Selby*, 420 Mass. 656, 663-64 (stating that although trickery and deception are disfavored, they do not necessarily produce involuntary confessions).

105 (Memo 12, RA360).

acted as a look-out and was not responsible for actually starting the fire. Rosario's involvement then moved from that of a lookout to one bearing primary responsibility. Other examples of maximization include testimony that one of the interrogators "got up, walked around the room, turned around and asked questions quick and in a rapid manner,"[106] and that shortly after Rosario signed the second statement, one of the interrogators falsely told Rosario that he had "certain information" and wanted to "know if he was part of it."[107]

4. Mr. Rosario's 8-hour interrogation increased the danger of false confession.

The length of an interrogation also serves as a situational risk factor that gives rise to a greater likelihood of false confessions.[108] Research shows that extended interrogations in isolation can cause suspects to grow increasingly distressed and can heighten the likelihood of a false confession.[109]

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106 (Tr., VR414-VR415, VR422)(Memo 12, RA360).
107 (Tr., VR455)(Memo 15, RA363).
108 Kassin, *supra* note 65, at 16.
109 *Id.; see also* Garrett, *supra* note 74, at 404 (study finding that 92% of false confessions in DNA exoneration cases were the result of interrogations of more than three hours).

In Rosario's case, the interrogation began at 10 pm and lasted for eight hours.[110] For context, in a recent self-report survey, the mean length of a typical interrogation was determined to be 1.6 hours.[111] Interrogators are cautioned not to exceed four hours of interrogation in a single session and a former Reid technique investigator has labeled interrogations that exceed six hours as coercive.[112]

While the general public is skeptical of the notion of an innocent person confessing, the jury in the Rosario case would likely have viewed the inculpatory signed statements differently had they been aware of the faulty forensic evidence that appeared to corroborate the factual account in the prepared statements. Specifically, had the jury known that the prosecution's Molotov cocktail theory was not consistent with a modern understanding of arson science -- and that, in fact, the physical evidence directly rebutted this theory -- the argument that Rosario's confession was coerced and unreliable would have carried more weight. Indeed, now that the flawed

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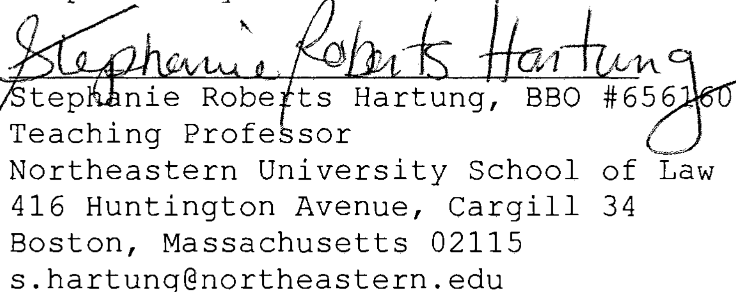
[110] (Tr., VR455)(Memo 11, RA359).
[111] *See* Kassin, *supra* note 65, at 16.
[112] *Id.*; *see also* FRED E. INBAU, JOHN E. REID, JOSEPH P. BUCKLEY & BRIAN C. JAYNE, CRIMINAL INTERROGATION AND CONFESSION 206 (5th ed. 2013).

forensic theory behind the arson investigation has come to light, it is clear that the facts set out in Rosario's signed statements are false. Instead, it is difficult to imagine a scenario in which they amount to anything more than the fire investigators' -- now interrogators' -- baseless theory of the crime.

CONCLUSION

For the foregoing reasons, amici respectfully ask this Court to affirm the Superior Court order granting Mr. Rosario's motion for a new trial and vacating his convictions.

Respectfully Submitted,



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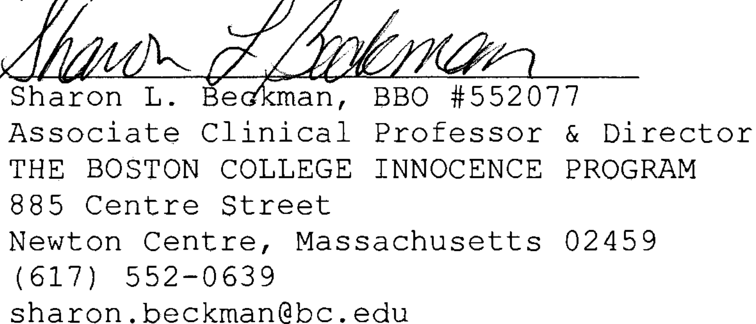

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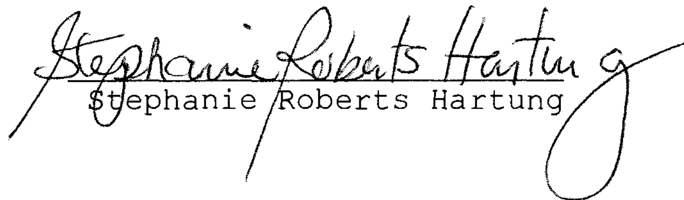
October 24, 2016

CERTIFICATON UNDER RULE 16 OF MASS.R.A.P.

Now comes, Stephanie Roberts Hartung, counsel for the New England Innocence Project, and hereby certifies that the Amici Curiae submitted herewith complies with the rules of court that pertain to the filing of briefs, including, but not limited to: Mass.R.A.P. 16(a)(6) (pertinent findings or memoranda of decision); Mass.R.A.P. 16(e) (references to the record); Mass.R.A.P. 16(f) (reproduction of statutes, rules, regulations); Mass.R.A.P. 16(h) (length of brief); Mass.R.A.P. 18 (appendix to the briefs); and Mass.R.A.P. 20 (form of briefs, appendices and other papers).

I further attest, that this brief is being filed under rule 13(a), and that the day of mailing is within the time fixed for filing by the court.



Stephanie Roberts Hartung