Examining convictions that have been quashed on the basis of factual error (factual error miscarriages of justice) can provide insight into systematic problems with evidence and evidence evaluation at criminal trials and circumstances in which innocent defendants may be being convicted of criminal offences. This article conducts an analysis of over two hundred and fifty such miscarriages of justice that have occurred over the last fifty years. Results highlight four key contributors to factual error miscarriages of justice – unreliable witness testimony, false or unreliable confessions, inadequate disclosure, and false or misleading forensic science. Analyses examine factual error miscarriages of justice generally and in each of these key areas, and highlight areas particularly in need of targeted reform and future research.

Introduction

In England and Wales, criminal convictions are overturned when they are found to be “unsafe” by an appeal court.\(^1\) Finding a conviction unsafe does not equate to a finding of actual

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innocence. As a result, courts do not rule on whether an innocent person has been convicted of a crime they did not commit. This approach makes conclusively identifying convictions of innocent defendants difficult. However, identifying cases that fall within a broader definition of miscarriage of justice – that is where fresh evidence shows a defendant may not be guilty (or that a reasonable jury would not have convicted the defendant) - is possible. Such cases are broadly equivalent to cases in which appeal courts find a conviction to be unsafe on the basis of factual error based on fresh evidence (which will be referred to as factual error miscarriages of justice). In such cases, courts will ask whether fresh evidence calls into question the safety of a defendant’s conviction (either on the courts own view, or based on the court’s evaluation of the effect the evidence might have had on the jury).

Successful appeals based on factual error frequently contain strong indications based on fresh evidence that the successful appellant did not commit the crime that they were accused of, or even that no crime occurred at all (typically in murder cases where a natural cause of death is identified). In fact, the vast majority of appeals overturned on the basis of factual error are

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2 For example, R v A (D) [CA, unreported, transcript 14, March 2000], “the Court is in no position to declare that the appellant is innocent…Our function is to consider whether in the light of all the material before us this conviction is unsafe” (Lord Bingham); see also Hannah Quirk, ‘Identifying miscarriages of justice: Why innocence in the UK is not the answer’ 70(5) Modern Law Review 759.
3 R (Adams) v Secretary of State, Re MacDermott’s Application and Re McCartney’s Application [2011] UKSC 18, 22-23.
4 See, for example, R v Amanda Jenkinson [2005] EWCA Crim 3118 (in which fresh evidence suggested that deteriorations of patients began at least five hours after the nurse who had been said to have caused them went off duty), R v Michael Shirley [2003] EWCA Crim 1976 (in which DNA evidence found on the victim following a rape and murder did not match the appellant or the victim), and R v Sean Hodgson [2009] EWCA Crim 490 (in which DNA evidence thought to be from the perpetrator did not match the appellant).
5 See, for example, R v Sally Clarke [2003] EWCA Crim 1020 and R v Donna Anthony [2005] EWCA Crim 952 (in which fresh evidence suggested innocent explanations for the deaths of the appellants’ infant children), R v David Ryan James (in which a note left by the “victim” in
likely to contain strong indications of the appellant’s innocence, since courts are typically hesitant to overturn such convictions in the absence of strong evidence. This hesitancy has been attributed to reverence to the principle of finality, and/or a fear of the opening of floodgates combined with limited resources. For the reasons above, convictions quashed on the basis of error of fact are clearly distinct from cases in which [factually] guilty defendants have their convictions quashed on the basis of legal or procedural errors, which can be considered more controversial, and are not included in the definition of miscarriages of justice for the purposes of this paper.

Examining factual error miscarriages of justice can therefore provide important insights into situations in which innocent people may have been convicted or may be at risk of being convicted in the future (although not all defendants with convictions quashed this way will be innocent and there may be many innocent defendants who have not had their convictions quashed). This insight is important in identifying systematic problems with evidence at trial that are likely to be leading to the convictions of innocent people, and in examining the extent to which interventions designed to improve evidence evaluation at trial have been successful in reducing evidential problems.

the case suggested it was really a suicide, see ‘UK vet’s murder conviction overturned’ (BBC News, 28 July 28th 1998) <http://news.bbc.co.uk/1/hi/uk/140779.stm> accessed 13 February 2021), and R v Patrick Nicholls [1998] EWCA Crim 1918 (in which fresh evidence suggested the “victim” in the case likely died from a heart attack having fallen down the stairs).


8 See R v Mullen (no 1) [1999] 2 Cr App R 143; Office for Criminal Justice Reform, Quashing Convictions: Report of a Review by the Home Secretary, Lord Chancellor and Attorney General (September 2006).
In the United States, the National Registry of Exonerations facilitates the examination of United States-based miscarriages of justice, however until recently there has been no equivalent database for miscarriages of justice in England and Wales. This paper presents data from a newly created and publicly available database of overturned convictions in England, Wales, and Northern Ireland, that is focused specifically on factual error miscarriages of justice. Such cases are likely to represent a relatively small number of successful appeals (with most successful appeals being based on error of law). The dataset contains details of 263 cases from England and Wales, involving convictions from 1970 onwards. Cases were identified via media searches, communications with organisations involved in miscarriage of justice focused work, searches of legal databases, and searches of the Criminal Cases Review Commission (CCRC) case library. Cases were selected for inclusion where a guilty verdict (i) was overturned on appeal based on fresh evidence and as a result of factual error at the original trial, (ii) was not substituted for another conviction), (iii) there was at least a year between the initial conviction and the successful appeal, (iv) there was either no re-trial or the defendant was found not guilty at a retrial, and (v) sufficient information was available about the case to allow inclusion. All categorisations were made by an initial reviewer, and then confirmed by at least one other reviewer. This database is the most comprehensive compilation of factual error miscarriages of justice in England and Wales, but it is not exhaustive.

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10 Miscarriages of Justice Registry <https://evidencebasedjustice.exeter.ac.uk/miscarriages-of-justice-registry/> accessed 13 February 2021. Note that this database is updated regularly based on new information. The specific version of the data underlying the analyses presented in this paper is available on request from the author.


particularly since sufficient information could not be obtained about all known cases. In addition, it is likely that the data collected could be skewed towards particular types of cases that are more likely to be reported, for example cases involving more serious offences are more likely to be reported than cases involving very low-level offending. Therefore, the data represents a collection of information relating to factual error miscarriages of justice that have occurred in England and Wales, rather than a complete set of miscarriage of justice cases.

This article examines the cases from this newly created database in order to provide insights into factual error miscarriages of justice that have occurred at trials over the last fifty years that have been identified by appeal courts. Analyses focus on general characteristics of such miscarriages of justice (e.g. gender of defendant, trends over time, and success of the appellant in securing compensation), and also on four key contributing factors to these miscarriages of justice identified by a thematic analysis. These four contributing factors are (1) unreliable witness testimony (where evidence at the original trial included witness testimony other than expert testimony that was later shown to be incorrect or misleading), (2) false or unreliable confessions (where evidence at the original trial included evidence of a statement made to law enforcement that was interpreted as an admission to all or part of the offence that was later shown to be incorrect or misleading), (3) inadequate disclosure (where important evidence

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13 Virginia Braun and Victoria Clarke, ‘Using thematic analysis in psychology’ (2006) 3(2) Qualitative Research in Psychology 77, 79 (“a method for identifying, analysing and reporting patterns across a data set allowing the authors to draw out new insight for the current exploration”). Note, reviewers had in mind contributing factors that have been identified in the USA but were guided by the data and not these existing categories. Thus, these categories differ from the categories identified by the US National Registry of Exonerations (e.g. inadequate disclosure is included, and inadequate legal defence is not included).


that may have assisted the defence was not disclosed by the prosecution,\textsuperscript{16} and (4) false or misleading forensic science (where evidence at the original trial included forensic science evidence that was subsequently shown to be incorrect or misleading).\textsuperscript{17}

**Characteristics of Factual Error Miscarriages of Justice**

The database contains details of 263 miscarriages of justice based on factual error, which occurred from 1970 to 2016 (no cases from 2016 onwards were identified). These cases represent a small proportion of the appeals against conviction allowed by the Court of Appeal Criminal Division (CACD).\textsuperscript{18} The fact cases only represent a small proportion of appeals allowed by the CACD is unsurprising since, as noted above, the vast majority of appeals that are allowed are allowed on the basis of error of law.

Twenty-seven of the cases in the database involved female appellants, and 232 of the cases involved male appellants. On average, there were 10.22 years ($SD = 8.86$) between the initial conviction in a case and the successful appeal and appellants had spent 7.13 years ($SD = 6.18$)


\textsuperscript{17} David Bernstein, ‘Junk science in the United States and the Commonwealth’ (1996) 21 Yale Journal of International Law 123.

in prison prior to their conviction being quashed. As a group, successful appellants spent approximately 1,832 years in prison as a result of unsafe convictions.  

A thematic analysis identified four key factors involved in error of fact miscarriages of justice. One hundred and seven (41%) of the cases involved unreliable witness testimony (68 of these cases involved witness testimony from a non-complainant, and 39 of these cases involved witness testimony from a complainant), 69 (26%) of the cases involved a false or unreliable confession, 55 (21%) of the cases involved false or misleading forensic science, and 47 (18%) of the cases involved inadequate disclosure.  

Forty-two percent of the identified miscarriages of justice involved a charge of murder. Eleven percent involved manslaughter or assault, 22% involved sex offences, 4% involved drugs offences, 19% involved robbery or burglary, and 13% involved another offence. The high proportion of cases involving murder may be because a comparatively large number of miscarriages of justice arise in murder cases, but may also be because such miscarriages of justice are more likely to be identified (as defendants are in custody for long periods, and may face particular incentives to clear their names) and because such miscarriages of justice are more likely to be reported on and therefore more likely to have been found by the searches described.

Often (in 21% cases) more than one type of evidence at the original trial was called into question on appeal. Figure 1 provides an overview of the types of fresh evidence relied on by the courts when quashing convictions.

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19 Note that this figure is only approximate since details on time served in prison are not available for all successful appellants.
20 Note that some cases involved more than one of these factors.
21 Note that some cases involved more than one offence.
Note that DNA evidence was used to effectively exclude the appellant as the perpetrator in only nine of the cases and was the only evidence relied on in quashing the conviction in six of these cases. This minimal role of DNA in identifying and remedying miscarriages of justice stands in contrast to analyses of similar cases in the USA, which suggest that the majority of exonerations involve DNA or other affirmative evidence of innocence.\textsuperscript{22}

Figure 1: Types of fresh evidence relied on by appeal courts in quashing convictions.

In 66 (25\%) of the cases, evidence was identified suggesting that compensation had been paid to the appellant following their successful appeal, either in the form of government compensation or damages from the police. In 19 (7.2\%) of the cases, evidence was identified

suggesting that compensation had not been paid to the appellant following their successful appeal. In the remaining cases no information relating to compensation could be found.\textsuperscript{23}

**Overall Trends in Error of Fact Miscarriages of Justice**

Over the fifty-year landscape examined here, several important changes have taken place in identifying factual error miscarriages of justice.

First, the approach of the courts to allowing fresh evidence appeals has fluctuated over time. This fluctuation has been linked to reactions to high profile miscarriages of justice.\textsuperscript{24} Importantly, the approach to be adopted by the courts in determining whether a conviction is unsafe based on new evidence has evolved. In 1974, the House of Lords rejected a previous objective test that involved asking whether the original jury might have been influenced by the fresh evidence and instead adopted a subjective approach, noting that “If the court has no reasonable doubt about the verdict, it follows that the court does not think that the jury could have one.”\textsuperscript{25} This approach was confirmed in 1989,\textsuperscript{26} and represented the law until the case of *R v Pendleton* in 2002.\textsuperscript{27} In that case, the majority of the House of Lords adopted a more liberal approach to allowing appeals, asking whether fresh evidence might have impacted on a jury decision. Following the *Pendleton* judgment, the approach of the courts to the safety of

\textsuperscript{23} It should be noted that compensation has been awarded in many more cases, however the database was only able to include compensation where it could be confirmed that it was received by a specific defendant. For more information on compensation rates see Hannah Quirk and Marny Requa, ‘The Supreme Court on compensation for miscarriages of justice: Is it better that ten innocents are denied compensation than one guilty person receives it?’ (2012) 75(3) Modern Law Review 387.

\textsuperscript{24} See, for example, R. Nobles and D. Schiff, *Understanding Miscarriages of Justice* (OUP 2000).

\textsuperscript{25} *Stafford v Director of Public Prosecutions* [1974] AC 878.

\textsuperscript{26} *R v Callaghan* (1989) 88 Cr App R 40; *R v Byrne* [1989] 88 Cr App R 33.

\textsuperscript{27} [2002] 1 WLR 72.
convictions in fresh evidence cases seems to have varied between a more objective test asking whether new evidence might have had an impact on the jury’s decision at trial,\textsuperscript{28} to a more subjective test, where the court makes its own evaluation of the fresh evidence.\textsuperscript{29}

Second, the CCRC came into operation on 31 March 1997, as a result of the 1995 Criminal Appeals Act, and following the recommendations of the Runciman Commission.\textsuperscript{30} The CCRC has the power to consider suspected miscarriages of justice, to arrange for their investigation where appropriate, and to refer cases to the Court of Appeal where the investigation reveals matters that ought to be considered further by the courts.\textsuperscript{31} Specifically, the CCRC can refer a case to the Court of Appeal where it considers that there is a “real possibility that the conviction…would not be upheld were the reference to be made.\textsuperscript{32}” Approximately 66\% of cases referred by the CCRC result in quashing of the relevant conviction.\textsuperscript{33} Since its inception, the CCRC has been criticised for referring too few cases,\textsuperscript{34} and for referring too many cases.\textsuperscript{35}

Reforms with the potential to influence miscarriages of justice were also introduced throughout the period. Figure 2 displays a timeline of some important and relevant reforms. Legislation

\textsuperscript{28} See, for example, \textit{R v Cullen} [2003] All ER (D) 151; \textit{R v Jenkins} [2004] All ER (D) 295; \textit{R v George} [2014] EWCA Crim 2507.

\textsuperscript{29} See, for example, \textit{R v Akiner} [2002] EWCA Crim 957; \textit{R v Hakala} [2002] EWCA Crim 162.


\textsuperscript{31} Criminal Appeals Act 1995, Part II.

\textsuperscript{32} Criminal Appeals Act 1995, s13.


\textsuperscript{34} For example, Andrew Sanders, Richard Young, and Mandy Burton, \textit{Criminal Justice}, 4\textsuperscript{th} edn (OUP 2010) 646-58.

\textsuperscript{35} \textit{R v Meachen} [2009] EWCA Crim 1701.
appears in the year it came into force. This timeline is intended to capture some important events with the potential to influence factual error miscarriages of justice, but is not intended to form a complete list of events that may be relevant. The events noted will be discussed in further detail in the specific sections of this paper that they are most relevant to. However, it should be noted that some reforms, such as the reforms made by the Criminal Justice Act 2003 to the admissibility of bad character evidence,\textsuperscript{36} have the potential to influence legal decisions more generally, and thus miscarriages of justice, through altering the overall evidence in a case.

Figure 2: Timeline of key events with the potential to influence factual error miscarriages of justice.

Figure 3 displays the number of identified miscarriages of justice that have occurred in each year since 1970 (i.e. the number of convictions occurring in that year that were later identified as factual error miscarriages of justice).

Figure 3: Number of convictions occurring each year that have been identified as miscarriages of justice based on factual error.

The data shows no clear trend in the number of identified miscarriages of justice that occurred in each year. The number of identified miscarriages of justice is highly variable, with the highest number (15) occurring in 1998. Numbers of identified miscarriages of justice are low after 2009, however this is unsurprising since the average time from conviction to successful appeal means that miscarriages of justice in these years may not have been identified yet.

Figure 4 shows the number of successful factual error appeals that have occurred in cases in the dataset each year since 1970.
Figure 4: Number of successful appeals based on factual error by year.

The data in figure 4 shows a clearer trend, with an increase in successful appeals from the early 1990s to around 2003 and then a decrease in successful appeals, although note that the database only includes convictions occurring from 1970, and so it is unsurprising that few convictions would already be being overturned in the early 1970s.

The trends in identified miscarriages of justice and successful appeals do not evidence any clear responsiveness to the relevant events detailed in Figure 2. This lack of a clear trend does not mean that no interventions were important, although it does show that existing interventions have not been sufficient to prevent factual error miscarriages of justice occurring relatively frequently.

**Factors involved in Error of Fact Miscarriages of Justice**
Unreliable witness testimony from non-experts

Unreliable witness testimony from non-experts was found to be the factor most commonly associated with identified miscarriages of justice, being involved in 41% of the cases identified. This finding is consistent with existing work showing a risk of wrongful conviction as a result of witness testimony. Witness testimony, and in particular eyewitness testimony, is often seen as a strong form of evidence, and the criminal justice system largely relies on the ability of the finder of fact to accurately assess the credibility and accuracy of the testimony of others.

However, research has shown that testimony can be unreliable, either because a witness is lying or because a witness is misremembering. Psychological research provides important insight into these phenomena. However, research also shows that jurors are likely to have difficulty distinguishing true and false memory, and that there is a misalignment between juror perceptions of cues that indicate accurate (or inaccurate) memory and scientifically validated probative cues. Similarly, finders of fact may struggle to assess the credibility of a witness.

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38 See, for example, R v Pendleton, “The assessment of the truth of verbal evidence, save in a very small number of exceptional circumstances is a matter for the jury” (per Lord Hobhouse) [2002] 1 WLR 72 at 45; JH and TG, “A witnesses ability to remember events, absent special considerations arising from the period of early childhood amnesia, will ordinarily be well within the experience of jurors” case numbers 04/5576/D3 and 04/5577/D3.
who may be deliberately lying. In one study, researchers found that adults perform only slightly better than chance at detecting lies in young children.\textsuperscript{42} In addition, cross-examination questioning tends to draw attention to cues that may be misleading in certain types of case, particularly in the context of trauma. For example, cross-examination may highlight inconsistencies in testimony that are thought to undermine the credibility of a witness, but may in fact be the result of blending memory of traumatic experience.\textsuperscript{43} As a result, there is a clear risk of miscarriage of justice resulting from witness testimony.\textsuperscript{44}

Over the period covered by this study, a number of legal reforms have been introduced, with the potential to impact on the evaluation of non-expert witness testimony. First, in the area of eyewitness identification specifically, a 1970s committee report noted a special risk of wrongful conviction in cases reliant wholly or mainly on eyewitness evidence of identification.\textsuperscript{45} In response to this risk, courts are obliged to either halt cases in which the prosecution case relies heavily on weak identification evidence, or to deliver a Turnbull direction to the jury, warning of the dangers inherent in identification evidence.\textsuperscript{46} However,

\begin{footnotesize}
\begin{itemize}
\item See also, Andrew Roberts, ‘The frailties of human memory and the accused’s right to accurate procedures’ (2019) 11 Criminal Law Review 912.
\item Devlin Committee, Report to the Secretary of State for the Home Department on Evidence of Identification in Criminal Cases (1976).
\item For more information on Turnbull directions and identification evidence more generally see Roderick Munday, Evidence (10th edn, OUP 2019), Chapter 12.
\end{itemize}
\end{footnotesize}
some research in the United States context has suggested that similar directions may not be effective.\textsuperscript{47}

Second, again in the area of eyewitness identification, Code of Practice D under the Police and Criminal Evidence Act 1984 (PACE) seeks to reduce miscarriages of justice arising from mistaken identifications. The code, most recently amended in 2017, provides detailed procedures that the police must follow when asking witnesses to identify suspects during the identification of crime.\textsuperscript{48}

Third, rules on care warnings in the case of uncorroborated evidence were changed by the Criminal Justice and Public Order Act in 1994 (CJPO). Prior to the CJPO, the finder of fact had to be warned of the danger of acting on uncorroborated evidence in cases involving accomplices acting on behalf of the prosecution and complainants in sexual cases. This requirement was abolished by CJPO.\textsuperscript{49}

Unreliable witness testimony from non-experts can be split into two primary categories – evidence from complainants, and evidence from others.


\textsuperscript{48} Police and Criminal Evidence Act 1984 Code D.

\textsuperscript{49} Criminal Justice and Public Order Act 1994 s32. For other relevant changes, see Criminal Justice Act 2003 s114 (extending the circumstances under which hearsay evidence can be admissible), Youth Justice and Criminal Evidence Act 1999 (allowing courts to issues special measures directions to assist vulnerable and intimidated witnesses), and CPD I.3E (outlining procedure for the questioning of vulnerable witnesses).
(i) **Witness evidence from non-complainant**

Of the 263 cases included in the examined dataset, 68 were identified as having involved unreliable witness testimony from a non-complainant (in 23 cases this included evidence from a “non-supergrass” police informant or co-defendant, in 15 cases this included evidence from a witness who alleged they had heard the defendant confess, in 16 cases this included eyewitness identification evidence, in 8 cases this included evidence from a “supergrass”, and in 19 cases this included other eyewitness evidence). Six of these cases involved female appellants and 62 involved male appellants. 64.7% of these cases were referred to the appeals courts by the CCRC.

Of these cases, 62% involved murder convictions, 4% involved a manslaughter or assault conviction, 6% involved a sexual offences conviction, 34% involved a robbery or burglary conviction, 6% involved a drug offence conviction, and 3% involved another type of conviction. 51 Seventeen (25%) were identified as having received some form of compensation, and evidence indicated no compensation having been given in five (7.4%) cases. Figures 5 and 6 display trends in the occurrence of miscarriages of justice involving witness evidence from a non-complainant, and successful appeals involving witness evidence from a non-complainant, respectively.

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50 See, for example, *R v David Cooper and Michael McMahon* [2003] EWCA Crim 2257; *R v Kamara* [2000] EWCA Crim 37; *R v Victor Nealon* [2013] EWCA Crim 574; *R v Stewart Allen* [2007] EWCA Crim 1428; *R v Sam Hallam* 2011/04293/c5.

51 Note that some cases involved more than one offence.
Figure 5: Number of convictions occurring each year involving witness evidence from a non-complainant that have been identified as miscarriages of justice based on factual error.

Data show the persistence of miscarriages of justice resulting from unreliable witness testimony of most types across the period studied (no miscarriages of justice have been identified from 2010 onwards, but this may be because of the time lag between a conviction occurring and that conviction being quashed). The exception is miscarriages of justice involving “supergrass” witnesses that occurred almost exclusively between 1980 and 1984. The data suggest miscarriages of justice involving unreliable witness testimony started to be identified around 1990. The one case from the 1970s involved significant evidence exonerating the defendant following his identification.\footnote{This case is the case of Luke Dougherty, see Finlo Rohrer, ‘The problem with eyewitnesses’ (BBC News, 24 August 2005) <http://news.bbc.co.uk/1/hi/uk/4177082.stm#> accessed 18 January 2021.}
Figure 6: Number of successful appeals occurring each year involving witness evidence from a non-complainant that have been identified as miscarriages of justice based on factual error.

(ii) Witness evidence from complainant

Of the 263 cases included in the examined dataset, 39 were identified as having involved unreliable witness testimony from a non-complainant. These cases typically included allegations from a complainant who was later discredited, for example by making other allegations shown to be false or by admitting that they lied in their testimony. Two of these cases involved female appellants and 37 involved male appellants. 54% of these cases were referred to the appeals courts by the CCRC.

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Of these cases, 92% involved a sexual offences conviction, and 8% involved another type of conviction.\footnote{Note that some cases involved more than one offence.} One appellant was identified as having received some form of compensation, and evidence indicated that two appellants received no compensation.

Figures 7 and 8 display trends in the occurrence of miscarriages of justice involving witness evidence from the complainant, and successful appeals involving witness evidence from the complainant, respectively.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{miscarriages.png}
\caption{Number of convictions occurring each year involving witness evidence from the complainant that have been identified as miscarriages of justice based on factual error.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{success.png}
\caption{Number of successful appeals occurring each year involving witness evidence from the complainant that have been identified as miscarriages of justice based on factual error.}
\end{figure}
Data suggest that miscarriages of justice resulting from witness evidence from the complainant began to occur more around 1985, after which their rates increased until the mid-2000s, after which they decreased again (although note that the decrease may be exaggerated by the time lag between a conviction and successful appeal, which means numbers in later years will likely increase as more cases are identified).

**False or Unreliable Confessions**

The second most common factor identified as being associated with identified miscarriages of justice was false or unreliable confessions. False or unreliable confessions have already been identified as a leading cause of miscarriages of justice. Research suggests that unreliable confessions can occur for a range of reasons but typically occur as the result of either custodial and interrogative pressure, or the psychological vulnerabilities of a defendant. Research shows that in the context of England and Wales, miscarriages of justice occur both as a result

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of custodial or interrogative pressure and psychological vulnerabilities. In England, a large number of miscarriages of justice arose as the result of corruption in a police unit in the West Midlands, the West Midlands Serious Crime squad, that operated from 1974 until 1989 when it was disbanded.

Procedural and evidential requirements have been introduced in an attempt to reduce the risks of miscarriages of justice caused by unreliable confessions. Most notably, Code of Practice C of PACE (which came into force in 1986) lays down detailed procedures that the police and other organisations must follow when interrogating suspects. Other sections of PACE also introduce requirements that are likely to increase the reliability of confessions, for example by giving the right to legal advice, requiring the tape recording of interviews, and requiring a confession to be excluded from evidence if it has been obtained by oppression. In addition, in the late 1980s the courts began admitting expert evidence on the issue of false confession, primarily from Dr. Gisli Guðjónsson, that was important in identifying many miscarriages of justice.

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61 Police and Criminal Evidence Act 1984 s58.
62 Police and Criminal Evidence Act 1984 s60.
63 Police and Criminal Evidence Act 1984 s76. For a more detailed summary of PACE provisions relating to confessions, see Roderick Munday, Evidence, 10th edn (OUP 2019), Chapter 10.
Of the 263 cases included in the examined dataset, 69 were identified as having involved a false or unreliable confession. Four of these cases involved female appellants, and 65 involved male appellants. 36.2% of these cases were referred to the appeals courts by the CCRC.

Of these cases, 68% involved murder convictions, 14% involved a manslaughter or assault conviction, 6% involved a sexual offences conviction, 17% involved a robbery or burglary conviction, 1% involved a drug offence conviction, and 13% involved another type of conviction.65 Thirty-Seven appellants (54%) were identified as having received some form of compensation, and evidence indicated one case in which no compensation had been given. Figures 9 and 10 display trends in the occurrence of miscarriages of justice involving a false or unreliable confession, and successful appeals involving a false or unreliable confession, respectively.

Figure 9: Number of convictions occurring each year involving a false or unreliable confession

Figure 10: Number of successful appeals occurring each year involving a false or unreliable confession

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65 Note that some cases involved more than one offence.
confession that have been identified as unreliable confession that have
miscarriages of justice based on error of fact. been identified as miscarriages of justice based on error of fact.

In the case of false or unreliable confessions, the data suggest that almost all identified miscarriages of justice occurred prior to the coming into force of PACE and the disbandment of the West Midlands Serious Crime Squad, and almost all successful appeals based on unreliable confessions occurred after the coming into force of PACE and the disbandment of the West Midlands Serious Crime Squad. Importantly, relevant confessions occurring after these events did not involve conduct by the police thought to contribute to the confessions. Rather the cases involved defendant intoxication,66 a psychological condition of the defendant,67 and pressure from a co-defendant.68 These trends suggest that regulations have been effective in reducing miscarriages of justice arising as a result of unreliable confessions and in at least significantly reducing police action that can lead to false confessions (based on current knowledge).

False or Misleading Forensic Science69

False or misleading forensic science was identified as the third most common factor contributing to miscarriages of justice in this analysis. In England, a significant number of miscarriages of justice in this area arose in cases involving the deaths of children as the result of misleading evidence given by the now discredited paediatrician, Sir Roy Meadows.70

A variety of forensic science evidence is introduced in criminal trials, through the opinions of experts. This evidence often speaks to the cause of death of a victim in a criminal case,71 but can also provide other probative insight, for example evidence may provide insight into whether a defendant was likely to have been at the scene of a crime.72 Forensic science evidence has the potential to provide important insight into criminal liability and has been described as a “mainstay in the functioning of our criminal justice system.”73 However, shortfalls in the reliability and influence of forensic science and associated expert evidence have been identified,74 and forensic science has played a role in a number of high profile miscarriages of justice. In 2011 the Law Commission produced a report on expert evidence in criminal proceedings following a 2009 consultation, concluding that expert evidence was being admitted too readily and with too little scrutiny.75 Although the Law Commission recommendations were not adopted as primary legislation, the common law evolved to require

70 See, for example, R v Sally Clarke [2003] EWCA Crim 1020; R v Angela Cannings [2004] EWCA Crim 1; R v Angela Alison Gay and Ian Anthony Gay [2006] EWCA Crim 820.
71 For example, R v Suzanne Holdsworth [2008] EWCA Crim 971; R v Angela Cannings [2004] EWCA Crim 1.
that courts only admit expert evidence if reliable,\textsuperscript{76} and practice directions introduced in 2015 assist the courts in making admissibility decisions and list matters that must be covered in expert reports.\textsuperscript{77} However, both practitioners and academics have noted that additional steps are needed to ensure the reliability of science before its use in courts.\textsuperscript{78}

The forensic evidence in courts may also have been influenced by the disbanding of the Forensic Science Service. The Forensic Science Service was a government owned company which provided forensic science services to police forces and government agencies in England and Wales until it was disbanded and ceased operations in 2012.\textsuperscript{79}

Of the 263 cases included in the examined dataset, 55 were identified as having involved false or misleading forensic science evidence. Sixteen of these cases involved female appellants and 39 involved male appellants. 32.7\% of these cases were referred to the appeals courts by the CCRC. Of these cases, 49\% involved murder convictions, 16\% involved a manslaughter or assault conviction, 11\% involved a sexual offences conviction, 6\% involved a robbery or burglary conviction, and 31\% involved another type of conviction.\textsuperscript{80} Twenty-one appellants (33\%) were identified as having received some form of compensation, and in five (9\%) cases evidence indicated compensation was not given.

\textsuperscript{76} R v Dlugosz; R v Pickering; R v MDS [2013] EWCA Crim 2. See also, Brian Brewis and Michael Stockdale, ‘Admissibility of Low Template DNA Evidence: R v Dlugosz; R v Pickering; R v MDS’ (2013) 77(2) The Journal of Criminal Law 115.

\textsuperscript{77} Crim PD 33A.4; Crim PD 33A.5.


\textsuperscript{80} Note that some cases involved more than one offence.
Figures 11 and 12 display trends in the occurrence of miscarriages of justice involving false or misleading forensic evidence, and successful appeals involving false or misleading forensic evidence, respectively.

Figure 11: Number of convictions occurring each year involving a false or unreliable forensic science that have been identified as miscarriages of justice based on error of fact.

Figure 12: Number of successful appeals occurring each year involving a false or unreliable forensic science that have been identified as miscarriages of justice based on error of fact.

Again, the data do not show a clear trend in the number of miscarriages of justice occurring as a result of false or misleading forensic evidence, but do evidence a general decline in such miscarriages of justice since 2009. This decline may suggest that legal changes in the 2010s have been effective, however it may be a result of the time lag between a miscarriage of justice occurring and it being identified at a successful appeal. Monitoring cases occurring over the next few years will provide additional insight into the effectiveness of relevant legal change.
Inadequate Disclosure

The fourth most common factor associated with identified miscarriages of justice was inadequate disclosure. Prosecution disclosure of unused material plays a key role in preventing miscarriages of justice, as Lord Bingham stated in *R v H & C*:

*Fairness ordinarily requires that any material held by the prosecution which weakens its case or strengthens that of the defendant, if not relied on as part of its formal case against the defendant, should be disclosed to the defence. Bitter experience has shown that miscarriages of justice may occur where such material is withheld from disclosure. The golden rule is that full disclosure should be made.*

In England and Wales the current disclosure regime is contained in the Criminal Procedure and Investigations Act 1996, as amended by the Criminal Justice Act 2003, which aimed to increase disclosure and reduce miscarriages of justice. Prior to the 1990s disclosure obligations were relatively limited. This limited approach was held to be inadequate in *R v Ward (Judith)*. Part 1 of the Criminal Procedure and Investigations Act 1996 gave statutory force to the prosecution duty of disclosure and altered the rules for when disclosure is required in what has been termed a “disclosure revolution.” This act outlined duties relating to primary and secondary disclosure. Specifically, under the act primary disclosure must be made of any prosecution

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82 *R v H & C* [2004] UKHL 3
material which has not previously been disclosed to the accused and which in the prosecutor’s opinion might undermine the case for the prosecution against the accused.85 Secondary disclosure must be made following the delivery of a defence statement, of previously undisclosed material that might reasonably be expected to assist the defendant’s defence.86 The Criminal Justice Act 2003 amended the duty of primary disclosure so that primary disclosure must be made of any previously undisclosed material which might reasonably be considered capable of undermining the case for the prosecution against the accused.

Thus, over the past 50 years the disclosure regime has become increasingly more expansive in terms of the unused material required to be provided by the prosecution to the defence. However, relevant legislation still does not provide defendants with specific robust safeguards, and there is a clear risk that disclosure failures never come to light. In addition, commentators have noted problems that have not been corrected by the statutory regime. Hannah Quirk argues that the regime ignores the perspectives and working practices of key protagonists in the system, for example by requiring culturally adversarial police to fulfil an effectively inquisitorial function and requiring prosecutors to view material from a defence perspective.87 Recent high-profile cases have highlighted continuing disclosure failures, lending support to Quirk’s contentions.88

85 Criminal Procedure and Investigations Act 1996 s3(1)(a).
86 S7(2)(a) Criminal Procedure and Investigations Act 1996 s7(2)(a).
Of the 263 cases included in the examined database, 47 were identified as having involved inadequate disclosure by the prosecution. Five of these cases involved female appellants, and 42 involved male appellants. 70% of these cases were referred to the appeals courts by the CCRC.

Of these cases, 64% involved murder convictions, 2% involved a manslaughter or assault conviction, 15% involved a sexual offences conviction, 11% involved a robbery or burglary conviction, 8% involved a drug offence conviction, and 6% involved another type of conviction. Sixteen appellants (34%) were identified as having received some form of compensation, and no compensation having been given was confirmed in three (6%) cases.

Figures 13 and 14 display trends in the occurrence of miscarriages of justice involving inadequate disclosure, and successful appeals involving inadequate disclosure, respectively.

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89 Note that some cases involved more than one offence.
that have been identified as miscarriages of justice based on error of fact. disclosure that have been identified as miscarriages of justice based on error of fact.

These trends suggest that while legislation relating to disclosure may not have prevented miscarriages of justice arising due to inadequate disclosure, it may have facilitated successful appeals in cases involving inadequate disclosure evidenced by the significant rise in successful appeals from the 2000-2004 period (although note that this data only confirms a rise in successful appeals after 1996, and does not necessarily demonstrate a causal relationship). No cases have been identified from 2010 onwards, but this may be because of the time lag between a conviction occurring and that conviction being quashed.

Conclusions

The data presented in this paper is designed to provide insight into the landscape of factual error miscarriages of justice and to inform future research. Overall, the data show that miscarriages of justice are persisting despite changes in legal regulation and are still a cause for concern in England and Wales. The clear exception to this persistence is in the area of false confessions, where PACE appears to have been successful at significantly reducing miscarriages of justice resulting from false or unreliable confessions, particularly where the false confession is related to police conduct. Reviewing PACE, the safeguards it provides to defendants, and the behaviour change it has facilitated in investigators may therefore be useful in informing reform in other areas. In the areas of inadequate disclosure and false or misleading witness evidence no clear impact of reforms in preventing miscarriages of justice arising is evident from this data. In both of these areas, the effectiveness of reforms may be lessened by
a failure to account for psychological realities of decision-making, either in jurors or the police and prosecution. Developing and introducing evidence-based reform taking into account the psychological and empirical realities underlying police, prosecution and juror decision-making has the potential to reduce miscarriages of justice. Importantly, such reform also has the potential to reduce false acquittals by improving the accuracy of decision-making more generally and by reducing errors at original trial that mean potentially correct convictions cannot stand on appeal.

The data presented in this paper should be interpreted in light of some additional considerations. The cases here only represent the tip of the iceberg of true miscarriages of justice since they only include cases that have been sufficiently reported to locate information on and they only include cases identified as miscarriages of justice by the courts. Importantly, deficits in the courts identifying miscarriages of justice should not be taken to mean that miscarriages of justice are not occurring. For example, in the case of disclosure, deficits will only be identified if legal representatives are able to uncover them. Their ability to do so many have been hampered by legal aid cuts. In addition, the number of cases identified as miscarriages of justice will be influenced by the effectiveness of the CCRC in referring cases to the Court of Appeal. Finally, it should be noted that in many of the cases, the ability of appellants to appeal successfully came down to luck. Defendants able to challenge their convictions are fortunate in that new evidence is available that can prove factual error at the original trial. In many other cases errors are likely to have occurred, but not to have been identified. For example, in a case where a defendant has been convicted of a rape, evidence of a physical abnormality making rape impossible can disprove the guilt of a defendant.90 In many other cases, defendants may not be guilty but may not suffer from an abnormality that allows

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90 *See R v Andrew F* [2009] EWCA Crim 2909.
them to prove this. It is therefore important to get evidence evaluation at a defendant’s initial trial right, in order to protect both victims and defendants.

Ultimately, the data in this paper and in the database that it is based on provide insight into the reasons that factual error miscarriages of justice are occurring. It is hoped that this data can provide a useful resource for academics and practitioners and can help inform future work to improve the experiences of innocent defendants caught up in the criminal justice system.