HIGH COURT OF AUSTRALIA

KIEFEL CJ,
BELL, GAGELER, KEANE AND EDELMAN JJ

EAMONN CHARLES COUGHLAN APPELLANT

AND

THE QUEEN RESPONDENT

Coughlan v The Queen
[2020] HCA 15
Date of Hearing: 12 February 2020
Date of Order: 12 February 2020
Date of Publication of Reasons: 24 April 2020
B60/2019

ORDER

1. *The appeal be allowed.*

2. *Set aside the order of the Court of Appeal of the Supreme Court of Queensland made on 16 April 2019 and, in its place, order that:*

   (a) the appeal be allowed;

   (b) the appellant's convictions for arson and attempted fraud be quashed; and

   (c) verdicts of acquittal be entered on each count.

On appeal from the Supreme Court of Queensland

Representation

S J Keim SC with M N B Thomas and D M Wells for the appellant (instructed by Craven Lawyers)

C W Heaton QC with M J Hynes for the respondent (instructed by Director of Public Prosecutions (Qld))

CATCHWORDS

Coughlan v The Queen

Criminal law – Arson and attempted fraud – Appeal against conviction – Where prosecution case based on circumstantial evidence – Where appellant's house destroyed by explosion and resulting fire – Where appellant present at and seen running away from scene – Where appellant gave version of events to police consistent with innocence – Where appellant made insurance claim on house and contents in connection with fire – Where no apparent financial motive to commit offences – Where expert evidence that explosion caused by build-up of gaseous vapours – Where petrol residues found on appellant's clothes – Where no evidence of petrol residues in house – Whether open to jury to be satisfied of appellant's guilt beyond reasonable doubt – Whether prosecution excluded reasonable possibility that explosion caused by build-up of gas ignited by electrical fire.

Words and phrases – "absence of apparent financial motive", "arson", "attempted fraud", "beyond reasonable doubt", "circumstantial case", "consciousness of guilt", "inference consistent with innocence", "lack of motive", "reasonable possibility", "scientific evidence".

Criminal Code (Qld), ss 408C(1)(c), 459, 461(1)(a).

1 KIEFEL CJ, BELL, GAGELER, KEANE AND EDELMAN JJ. The appellant was convicted following a trial in the District Court at Brisbane (Judge Clare SC and a jury) of arson[1] and attempted fraud[2]. An appeal to the Court of Appeal of the Supreme Court of Queensland (Morrison JA; Fraser JA and Mullins J agreeing) against the convictions was dismissed. By special leave granted by Bell and Gageler JJ on 18 October 2019[3], the appellant appealed to this Court on a ground which in substance contended that the evidence is incapable of supporting the verdicts. On 12 February 2020, the Court made orders at the conclusion of the hearing, allowing the appeal, and setting aside the order of the Court of Appeal, and in its place ordering that the appeal to that Court be allowed, the convictions be quashed and verdicts of acquittal be entered on each count. These are the reasons for making those orders.

2 The appellant and his family were living in a home in Narangba, Queensland. The appellant also owned a house in First Avenue, Bongaree on Bribie Island ("the house"). At around 6.00 pm on Saturday, 18 July 2015, there was an explosion inside the house and it was destroyed in the resulting fire. The explosion was so strong that it blew the western wall off its foundations. The heat from the fire was intense. The appellant was present at the scene and he was sufficiently close to the explosion to suffer burns to his left hand and lower back, and fairly superficial burns to his face. In its immediate aftermath, the appellant ran out through the front gate and down the road past a number of people. A youth standing near the front fence, and another youth standing near a Subaru station wagon that was parked in front of the house, each called out to him. So did a neighbour. The appellant kept running and did not respond. He rode off on a motorcycle that he had parked around the corner in a carpark earlier that afternoon ("the motorcycle").

3 At around 9.00 pm that same night, the appellant entered the Caboolture Police Station and reported the fire. The police who saw him accepted that he appeared to be distressed and in shock and that he reported that someone had tried to kill him. They did not smell petrol on him. He was co-operative and agreed to give the police the clothes that he was wearing at the time of the explosion. These

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1 *Criminal Code* (Qld), s 461(1)(a).

2 *Criminal Code* (Qld), s 408C(1)(c).

3 [2019] HCATrans 205.

included a pair of tracksuit pants and sports shoes, which subsequent testing established contained petrol residues.

4 The appellant participated in two lengthy interviews with Detective Senior Constable Weare. The first interview was conducted at the Emergency Department of the Caboolture Hospital, where the appellant was receiving treatment for his injuries ("the first interview"). The first interview commenced late on the evening of 18 July 2015 and continued into the early hours of the following morning. The second interview was conducted on 22 July 2015 at the Royal Brisbane Hospital, where the appellant was receiving further treatment ("the second interview"). In each interview, the appellant maintained his belief that the explosion was the work of someone who was trying to harm or kill him.

5 Sergeant Gormon of the Queensland Police Service's Gold Coast Scientific Office and Lindsay Spencer, a fire investigation officer with the Queensland Fire Service, each examined the exterior of the house on the morning after the fire. Each said that the explosion was caused by a build-up of gaseous vapours inside the house and an unknown source of ignition. Neither was able to identify the substance that gave off the gaseous vapours. Neither could exclude an electrical fire as a possible source of ignition.

6 The following day, the appellant made a claim on his NRMA building and contents insurance policy in connection with the fire. This conduct was the subject of the second count in the indictment.

7 It was no part of the prosecution case that the appellant had any apparent financial motive for the arson. He had personally just completed 12 months of "high-end renovations" on the house. It was the family's holiday home. Items of sentimental value were lost in the fire. The house and its contents were not over-insured. Indeed, in sentencing the appellant, Judge Clare described him as having been "underinsured". An expensive boat, which was stored in the garage adjacent to the house, was uninsured. The appellant was not in apparent financial stress. It was undisputed that the appellant had an amount of the order of $300,000 in his account with the Commonwealth Bank.

8 The appellant did not give evidence. His version of events was before the jury in the form of the answers given in his interviews with the police. He represented himself at the trial. He appeared at times to be fixated with peripheral issues. Much of his cross-examination appears to have been directed to establishing that the investigating police were prejudiced against him and had conducted a biased investigation. It was common ground that there were ill feelings between the appellant and Detective Weare. Indeed, Detective Weare

acknowledged that he had not investigated anyone other than the appellant in connection with the fire and that he had told staff at the NRMA and others that he hated the appellant.

9 Claimed inadequacies in the investigation were also prominent in the conduct of the appellant's appeal against his convictions in the Court of Appeal. It is unnecessary to refer in any detail to much of the evidence on which the appellant's submissions in the Court of Appeal depended. The rejection of those arguments may be accepted. Nonetheless, as will appear, the Court of Appeal overstated aspects of the expert evidence, which were critical to their Honours' conclusion that the evidence supported the verdicts.

The prosecution's circumstantial case

10 The respondent maintained that, when all of the circumstances are considered together, the Court of Appeal's conclusion was correct. The respondent relied on the following five circumstances:

(a) opportunity – the appellant's presence at the scene of the explosion;

(b) the cause of the explosion being from a build-up of vapours like gas or petrol;

(c) petrol residues on the appellant's clothing;

(d) witnesses smelling petrol before the explosion; and

(e) flight and false alibi.

11 To explain why the respondent's submission was rejected, it is necessary to refer at least in outline to the following evidence.

The youths outside the house

12 Four youths were in the vicinity of the house at the time of the explosion: Kye Patruno, Jack Dyke, Jessie Drayton, and Jake Long. Patruno lived next door to the house. The four were planning to go on a camping trip. Patruno and Drayton were inside Patruno's house collecting some camping gear, and Dyke and Long were waiting outside in a Subaru station wagon, when the explosion occurred.

13 Patruno gave evidence that as he walked to the gate of his home, he noticed a strong smell of petrol. After hearing the explosion, he and Drayton ran outside. He saw the fire and he walked towards the house calling out "[i]s anybody okay?

Is anyone in there?" He waited for about 30 seconds but when he did not see or hear anyone at the house, he joined his friends at the Subaru. He saw a dark, shadowy figure running away. He and his friends left the scene after making sure that the emergency services had been called but before the arrival of the police.

14 Patruno agreed that his statement about these events was made two years and four months after the explosion. He explained that the delay was occasioned by "personal issues with the Bribie Island police" and concerns for his personal safety, and that he "didn't want to bring [his] mum into it, because she has very high stress levels when it comes to danger like that". In the event, his mother persuaded him to make the statement. He agreed that he understood that it had been suggested by someone that he had set fire to the house. He agreed that Detective Weare told him that if he did not give evidence, he might be accused of the offence. He also agreed that he had been persuaded to make the statement because "Ben was having trouble with – Mr Weare – sorry – was having trouble with evidence". Patruno had spoken to a reporter for a television station and suggested that the explosion may have been triggered by a Molotov cocktail. He explained that this was just a theory. He had first spoken to uniformed police officers on the day after the fire or the following day. He was unable to recall what he had been asked. There was no evidence that Patruno told these officers that he had smelt petrol before the explosion.

15 Dyke gave evidence that, while he waited in the Subaru, he asked Long if he could smell petrol and Long agreed that he could. Dyke said that a little later there was a big bang and he looked around and saw that the house was on fire. He got out of the car and started walking to the front gate of the house when someone came running out. He asked if "he was okay" but the man ran straight past him and kept running. In a statement given to the police closer to the time of these events, Dyke nominated Long as the one who had first commented on the petrol smell. At trial he was unable to recall who first made the comment. Long and Drayton had each moved interstate and the police did not obtain statements from either. Neither gave evidence at the trial.

16 A number of witnesses gave evidence of seeing a man running from the scene shortly after the explosion. Two young girls described the man as having a darkish beard and riding off on a motorcycle that did not have a numberplate. It appears that the appellant did not have a beard at the time and that the motorcycle on which he rode away had a numberplate. A neighbour gave evidence of hearing the explosion and going outside and seeing a tall man who may have been dressed in black leather running. She called out to see if the man was okay, but he did not respond. She saw some kids getting into a car and heard one of them complaining,

"something about ... he couldn't believe this has happened, and he was still a little bit aggressive about it and got in the car with his friends and drove off".

The scientific evidence

17 Ms Maxwell, an employee of the Queensland Police Service Analytical Services Unit, gave evidence of the results of tests carried out on the appellant's clothing. On 19 July 2015 she received a pair of tracksuit pants, a pair of sports shoes, two jumpers and a t-shirt. At the time of receipt, the items were packaged in individual, fire-debris sampling bags. At this time Ms Maxwell was not aware that all five items had originally been stored together with the appellant's motorcycle helmet and his backpack and its contents in a large paper bag.

18 Ms Maxwell tested each item using a gas chromatograph mass spectrometer. This produced a profile from which she was able to determine the presence of any ignitable liquid residues. The tracksuit pants and the shoes contained petrol residues. The two jumpers and the t-shirt contained light to medium aromatic-product-class ignitable liquid residues. In her evidence-in-chief, Ms Maxwell said that the tracksuit pants and the shoes were probably in contact with liquid petrol and the three other items were probably in contact with petrol vapours. An explanation for the light to medium aromatic-product-class ignitable liquid residues on the two jumpers and the t-shirt was that they had been stored in the same bag as the tracksuit pants and the shoes.

19 Ms Maxwell did not give any estimate of the amount of petrol residues found on the tracksuit pants or the shoes. The minimum detection level using a gas chromatograph mass spectrometer is one microlitre in a litre: if a litre of any liquid is broken up into a million parts, Ms Maxwell could detect petrol residues in a single part. She agreed that she had on an earlier occasion made the same point by explaining that the test would yield a positive result for the presence of petrol residues from one drop of petrol in an Olympic-sized swimming pool.

20 Ms Maxwell was unable to offer any opinion on the age of any contact between the tracksuit pants and the shoes with liquid petrol. All she could say was that petrol residues were found. Ms Maxwell was asked if there was a period of time after which she would no longer expect to obtain a positive result for petrol residues. She responded that it depended upon the sample and the length of time before the item was packaged in a fire-debris sampling bag or tin. She observed that there were no published studies on this topic. Ms Maxwell said that a colleague had tested different quantities of petrol on clothing and had been unable to detect half a millilitre of petrol four hours after the clothing had been in contact with the petrol. The tests were undertaken in support of the colleague's successful

candidacy for the award of a Master's degree. Ultimately, Ms Maxwell said the period of time that would need to pass before testing would no longer yield a positive result depended on the quantity of petrol residues present and the length of time before the item was packaged correctly. She explained that packaging items in a fire-debris sampling bag or tin preserves residues of accelerants. It is to be recalled that Ms Maxwell did not give an estimate as to the amount of petrol residues found on the tracksuit pants and the shoes.

21 Ms Maxwell explained that activities such as filling up a car with petrol do not ordinarily cause an individual to have petrol on his or her clothes. Her opinion was based on a published study of the results of testing the clothing of three groups of people for the presence of petrol. The first group comprised 29 persons who had recently filled their cars with petrol. In no case were traces of petrol detected. The second group comprised 17 persons who had recently filled up a lawn mower with petrol. Traces of petrol were detected on the shoes of two persons and the components of petrol were detected on the clothing of a third person. The third group comprised a service-station forecourt attendant, a mechanic, and a person who mowed lawns professionally. Petrol was detected on the upper and lower clothing of the forecourt attendant at the end of one shift. No petrol residues were detected on the forecourt attendant's clothing after a second shift. No petrol residues were found on the mechanic's clothing or, after two shifts, on the clothing of the person who mowed lawns professionally.

The fire scene examination

22 Sergeant Gormon inspected the exterior of the house on the morning after the fire. The fire damage was so extensive that she assessed the remains to be structurally unsafe. She also had concerns that exposed fibro sheeting might contain asbestos. She was unable to determine the seat of the fire other than to state that it originated within the house. She was unable to determine the fuel source. She did not take any samples to test for the presence of accelerants because she did not enter the remains of the interior of the house.

23 Sergeant Gormon said that, for an explosion such as this one to occur, there had to be a large amount of fuel in a gaseous form present. She was unable to rule out an electrical fire as the cause of ignition. She said that normally an electric safety officer would examine electrical items and fire-damaged wires. However, because of the extent of the damage, Sergeant Gormon considered that there was no point arranging for such an examination because there was nothing to examine and she was not going to send an electric safety officer into a scene that she assessed to be unsafe.

24 Mr Spencer also inspected the house on the morning after the fire. He, too, confined his examination to the exterior of the house. He saw no utility accessing the interior because he was able to see as much from the outside. He did not take any samples for testing as this was the responsibility of "the police forensics".

25 Mr Spencer considered that there had been a "vapour explosion". He noted that glass had been blown into small pieces and covered a distance of about 20 metres; external verandah louvres had been blown out onto the footpath and the western wall had been blown directly off its foundations. Mr Spencer expressed the opinion that the explosion was caused by the intentional introduction of an ignition source. He could not, however, rule out an electrical fire as the source of ignition, although he observed that the remaining damage was not consistent with an electrical slow-developing fire.

The appellant's account in his interviews

26 The appellant's answers in each of the interviews were discursive. He volunteered that he was seeing a psychologist and a psychiatrist and that he suffered from mood swings. He said that he took citalopram for stress and anxiety, or mixed moods, and that he stayed over quite often at the house if he was "having a shit time … with moods up and down". He complained of having memory problems, saying "I just forget things and I can remember some things and I don't remember other things and I just don't know what it is, why it is, and it's not Alzheimer's or anything like that I don't think but as they say … I've become a bit of a hypochondriac. I've had every medical check done that you can have done. I'm fucked mentally alright." In the second interview he said that his mind was clearer, a circumstance that he attributed to the fact that he was no longer wearing Norspan patches. He complained that the patches affected his memory.

27 In the first and second interviews, the appellant said that he had placed an advertisement on the Gumtree website offering to sell the motorcycle, which belonged to a friend, Jake Pullen. The appellant explained that he assisted friends in selling goods online from time to time. On the Wednesday or Thursday preceding the explosion, the appellant said, he had been working on renovations to the house when he was approached by a man, who inquired about purchasing the motorcycle. It had been advertised for sale at a price of $2,500. They agreed on a price of $2,300. The man offered to pay with a cheque but the appellant was unwilling to accept a cheque from a stranger. The man offered to come back the following day with cash. The appellant had other commitments on that day and they agreed to meet at 5.00 pm on Saturday, 18 July 2015.

28 The appellant said that he rode the motorcycle to the house on the Saturday afternoon. He arrived at around 5.00 pm. He parked the motorcycle around the corner as he was concerned that there might be something "dodgy" about the prospective purchaser.

29 The appellant realised on arrival at the house that he had forgotten to bring the key. He sat at an outdoor table setting located at the back of the house and read a local newspaper while he waited for the purchaser. He did not see anyone at or near the house during this time. After an hour he decided to leave. He walked to the front of the house and "[s]omething hit me, it went bang. It sounded like a bomb ... I hit the ground. My hand was up. Someone's screaming at me and I fuckin' ran." There was a "Subaru or Forester" station wagon parked at the front of the house and a man on the driver's side was screaming at him. The appellant ran to the carpark, got on the motorcycle and rode away in fear.

30 The appellant maintained that he believed he was being followed as he rode away from the scene. When he reached the Bruce Highway he turned right towards the Sunshine Coast and thereafter he did a series of left and right turns to avoid any pursuer. He said that he stopped by a derelict house where he had washed his face and hands under an outside tap before going to the Caboolture Police Station.

31 The appellant's account of placing the advertisement for the sale of the motorcycle on the Gumtree website was unchallenged. Detective Weare spoke with Jake Pullen, who confirmed that he had given the appellant the motorcycle to sell.

A false alibi?

32 In the first interview, the appellant gave an account of his movements on the day of the explosion. He said that in the morning he was using a leaf blower to clean up leaves at his Narangba home. He asked his wife to help him by putting the leaves in a bag. She refused, saying that she did not want to get her clothes dirty. He "got the shits" and told her that he was going "to see the guys from the club". Later in the first interview, when Detective Weare sought to direct the appellant's attention again to the argument with his wife, the appellant responded "… have you ever lived with anyone with a medical disorder? … like are they unpredictable sometimes? … I get into a rage for no reason sometimes … [a]nd what I do is go get in the car and fuck off. I go for a drive and I just say leave me alone, don't talk to me … what I was feeling guilty about was psychological abuse by me having rages in the house." His account of his movements after leaving the Narangba home was rambling. He was asked about the whereabouts of his car and he said he believed that it was parked at his Narangba home.

33 In the second interview, the appellant said that after arguing with his wife over cleaning up the leaves, he had driven to Caboolture to pick up some strawberries. He had then left his ute at the Narangba pub. He said that while he had gone to have a drink, instead he had just sat at the pub "trying to calm myself down". In the end he got the strawberries out of the back of the car and walked home, "cause sometimes when I get stiff ... or whatever I just walk it off". He had forgotten that he had left the ute at the pub.

34 In this Court, the respondent sought to support the Court of Appeal's conclusion, that the evidence supported the verdicts, by submitting that it was open to the jury to find that the appellant parked his car in the Narangba hotel carpark in view of CCTV surveillance cameras to set up a false alibi. It was further submitted that it had been open to the jury to find that the appellant parked the motorcycle at a distance from the house in the expectation that he could light the fire and leave the house without detection.

35 While the prosecution relied upon the appellant's flight from the scene as an implied admission of his guilt of arson, it does not appear that it invited the jury to find that the appellant had set up a false alibi and from such a finding to draw an inference of guilt. The trial judge's instructions on reasoning from the appellant's conduct to his consciousness of guilt of arson were confined to the circumstances of his departure from the scene after the explosion. The suggested false alibi played no part in the Court of Appeal's analysis of the capacity of the evidence to support the verdicts. It is a suggestion that does not rise higher than conjecture and may be put to one side.

The Court of Appeal

36 Morrison JA wrote the leading judgment in the Court of Appeal. The appellant's first ground in his amended notice of appeal in the Court of Appeal contended that "the jury's verdicts of guilty are unreasonable and cannot be supported having regard to the evidence". The second ground contended that an "hypothesis advanced by the appellant was not excluded, namely someone other than the appellant caused the appellant's home to explode". The second ground was a particular of the first. In the way the appeal was conducted the two became a combined ground; the basis upon which it was submitted that the verdicts could not be supported by the evidence was the inability to exclude an hypothesis advanced by the appellant[4]. This was the hypothesis that the "bearded" man seen running from the scene by some witnesses was a person other than the appellant

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4 *R v Coughlan* [2019] QCA 65 at [9].

("the second man hypothesis"). Morrison JA's conclusion that it was open to the jury to exclude the reasonable possibility that there was a second man who ran from the scene may be accepted, largely for the reasons that his Honour gave in a meticulous review of the civilian witnesses' evidence. The focus on the capacity to eliminate the second man hypothesis, however, was apt to distract attention from the capacity of the evidence, viewed as a whole, to establish that the explosion was caused by a deliberate act and that the appellant was the actor.

37 Morrison JA reviewed the appellant's description of his mental state in his interviews with Detective Weare. His Honour observed that the jury had before it a body of evidence that might have suggested that the appellant had a volatile character and that the explosion and fire were the result of "a black mood" on his part[5]. Ultimately, his Honour said that it was not necessary to reach a conclusion as to the impact of this part of the evidence. His Honour found that it was open to the jury to conclude that the appellant was guilty, notwithstanding the absence of an obvious financial motive.

38 Before turning to Morrison JA's reasons for his Honour's ultimate conclusion, two related points concerning the absence of apparent financial motive and the evidence of the appellant's volatile mental state may be noted. While, as Morrison JA correctly observed, lack of motive is not fatal to the conclusion of guilt, the proven absence of apparent financial motive[6] had particular significance with respect to proof of the appellant's guilt of the offence of wilfully and unlawfully setting fire to the house. The unlawfulness of setting fire to the appellant's own property lay in proof that his purpose in so doing was to make a fraudulent claim on his insurer. Had the appellant set fire to the house in anger over the argument with his wife, as Detective Weare suggested in the course of the first interview, or more generally because of his volatile mental state, as Morrison JA suggested, he would not have been guilty of the offence[7]. The acknowledged absence of apparent financial motive was a circumstance of some moment.

39 Morrison JA took into account the following circumstances in addition to the expert evidence: that the appellant was the only person seen near the house that

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5 *R v Coughlan* [2019] QCA 65 at [395].

6 *De Gruchy v The Queen* (2002) 211 CLR 85 at 92-93 [28]-[30] per Gaudron, McHugh and Hayne JJ.

7 *Criminal Code* (Qld), ss 459, 461(1)(a).

afternoon; Patruno's and Dyke's evidence of smelling petrol shortly before the explosion; that while some of the youths who were outside the house had criminal records, it was open to the jury to exclude them from involvement in the explosion; and that, even allowing for the fact that the appellant might have been in a state of shock after the explosion occurred, it was open to the jury to be sceptical of the appellant's account that he continued to believe that he was being pursued all the way to the Bruce Highway.

40 Morrison JA's analysis of the sufficiency of the evidence to support the verdicts was dependent upon inferences drawn from the expert evidence. The analysis should be set out in full:

> "[389] The jury were confronted with a dilemma which they had to resolve in terms of the assessment of the evidence overall. On the one hand they had the interviews with the appellant, in which he steadfastly denied any involvement and said that he was never in the house on that afternoon. And there was no obvious financial motive to carry out the arson.
>
> [390] On the other hand, the expert evidence established that the explosion was as a result of vapour, it originated inside the house, and *at some point the appellant's tracksuit pants and shoes came into contact with liquid petrol. That contact with petrol could not have been as a result of the casual activities of filling a car at a service station or mowing the lawn or storing the clothes in a shed. Because the appellant did not give evidence, there was no basis upon which the jury could have concluded that any such thing was possible*.
>
> [391] Therefore, as against the appellant's denials of involvement, and as well the lack of obvious motive, *there was very powerful evidence from the scientific experts that the appellant's shoes and tracksuit pants had been in contact with liquid petrol within hours before the items were tested*. What, then, is the explanation for the appellant's having come into contact with liquid petrol on his tracksuit pants and shoes on the afternoon that his house burned down as a result of a vapour explosion. In my view, *the obvious response is that the appellant was involved in distributing petrol which led to that explosion.*
>
> [392] Further, the mere fact that the appellant's shoes and tracksuit pants were in contact with liquid petrol that afternoon was a powerful piece of evidence compelling rejection of the appellant's version that he was not in the house at any time that afternoon. On the appellant's account given in the interviews there was no occasion that day when his shoes or tracksuit pants

could have come into contact with liquid petrol. The two versions are simply irreconcilable, but there was compelling support for the presence of the petrol from Maxwell." (emphasis added)

41 No expert evidence was led to suggest that the fairly superficial burns to the appellant's face, and the burns to his lower back and left hand, were consistent with him having been inside the house at the time of the explosion. Given the force of the explosion and the intensity of the heat generated by the fire, the respondent fairly acknowledged that "perhaps common sense might dictate otherwise". The respondent noted that Morrison JA's analysis was posited on the appellant having distributed petrol inside the house that afternoon but not on him having been inside the house when the vapours were ignited. Where the appellant was at that time, and the means by which the vapours were ignited, in the respondent's submission, "remains, to some extent, a mystery".

42 The essential steps in his Honour's analysis were the findings that: (i) the appellant's tracksuit pants and shoes had been in contact with liquid petrol; (ii) that contact was within hours before they were tested; and (iii) the contact could not have been the result of casual activities. In each respect, the findings overstated Ms Maxwell's evidence. As to (i), testing by gas chromatography mass spectroscopy established that the tracksuit pants and the shoes contained petrol residues. While at one point in cross-examination Ms Maxwell said this result made it highly likely that these items had come into contact with liquid petrol, she returned in re-examination to the opinion she had expressed in her evidence-in-chief, namely, that it was probable that they had come in contact with liquid petrol.

43 As to (ii), the finding that the tracksuit pants and the shoes had been in contact with liquid petrol within hours before being tested appears to have been based on Ms Maxwell's evidence of tests carried out by a colleague[8]. The results of this unpublished study did not, however, cause Ms Maxwell to depart from her evidence, which was that "I can't offer any opinion on the age of the contact. I can only tell you that the petrol residues were found."

44 As to (iii), Morrison JA rejected the reasonable possibility that the petrol residues detected on the appellant's tracksuit pants and shoes could have come from casual activities, such as filling a car at a service station, mowing the lawn, or storing the clothes in a shed, because the appellant did not give evidence of such an event. The evidence did not exclude the possibility that petrol residues may be found on clothing as the result of casual activities. In the published study to which

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8 *R v Coughlan* [2019] QCA 65 at [391] fn 579.

Ms Maxwell referred, traces of petrol were found on the shoes of two, and components of petrol were found on the clothing of one, of the 17 persons who had filled a mower with petrol. The possibility of an explanation for the presence of an unknown quantity of petrol residues on the appellant's clothing as the result of some casual contact was to be taken into account in weighing all of the circumstances. That is so notwithstanding that the appellant did not describe any casual contact with petrol, albeit that in detailing his activities on the morning of the day of the explosion, he said that he had cleaned up leaves at his Narangba home with a petrol-powered leaf blower.

The respondent's case in this Court

45 The Court of Appeal's conclusion that the appellant distributed petrol inside the house was expressed to be based upon the expert evidence alone. In material respects the effect of that evidence was overstated. Ms Maxwell's evidence was not capable of supporting the finding that the appellant was inside the house distributing petrol on the afternoon of the explosion. The respondent submitted that, regardless of any overstatement of the effect of Ms Maxwell's evidence, the Court of Appeal was right to find that upon the whole of the evidence it was open to the jury to be satisfied beyond reasonable doubt that the appellant distributed petrol inside the house and that he ignited the petrol vapours[9]. Patruno's and Dyke's evidence that they smelt petrol prior to the explosion, taken with the presence of petrol residues on the appellant's tracksuit pants and shoes, sustained the inference beyond reasonable doubt that the explosion was of petrol vapours. The appellant's presence at the scene and flight from the house, taken with the presence of the petrol residues on his clothing, supported the further inference that he distributed the petrol and caused its ignition. It was open to the jury, in the respondent's submission, to reject the appellant's account of his reason for being at the house that afternoon, and for fleeing from the scene, as implausible.

The fire the result of direct human involvement?

46 In written submissions, the respondent contended that there was no challenge to the expert evidence that the fire was "the result of direct human involvement". This was a reference to Mr Spencer's opinion:

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9 *M v The Queen* (1994) 181 CLR 487 at 493 per Mason CJ, Deane, Dawson and Toohey JJ.

"Q. ... did you form an opinion as to whether the cause of the fire was as a result of human involvement?

A. I did. I formed an opinion, yes.

Q. Okay. And what was your opinion in relation to that?

A. My opinion was it was direct human involvement and the cause was incendiary.

Q. And what does that mean?

A. Incendiary means a fire that has been lit by a person or persons unknowing – knowing that it should not be lit."

47 This evidence was admitted without objection, notwithstanding that Mr Spencer did not explain the basis upon which the conclusion of direct human involvement rested. It is a conclusion that is difficult to reconcile with Mr Spencer's acceptance that he could not "rule out the cause of the fire as [being] an electrical fire".

48 It is not correct to say that Mr Spencer's opinion as to direct human involvement was unchallenged. In cross-examination, the appellant put to Mr Spencer, and he accepted, that he had previously acknowledged that Sergeant Gormon's "information was at a higher standard [than his] because of her science training". Mr Spencer added that this opinion also took into account Sergeant Gormon's role within the Queensland Police Service. The appellant then sought to obtain Mr Spencer's acceptance of Sergeant Gormon's opinion that:

"The ignition source was unable to be determined. The first fuel ignited was unable to be determined. The cause of the fire was undetermined."

49 While much of the appellant's focus at the trial was directed to the possibility that the explosion was the work of some malefactor who was trying to kill him, the defence case was left as one in which there was no direct evidence that the fire was deliberately started by anyone. The trial judge reminded the jury in this respect that Sergeant Gormon and Mr Spencer could not positively determine the cause of the fire**.** In summarising Mr Spencer's evidence, her Honour also reminded the jury that he could not rule out an electrical fire.

The ground of appeal in this Court

50 The appellant's ground of appeal in this Court contends that the Court of Appeal misapplied the principles in *M v The Queen*[10] in that their Honours merely identified a pathway to a verdict of guilty rather than weighing those matters which militated against guilt to determine whether the jury ought to have entertained a reasonable doubt. Morrison JA set out the principles governing the determination of an appeal on the ground that the conviction is unreasonable or cannot be supported having regard to the evidence by reference to *M v The Queen* and the authorities that have followed it[11]. The appellant's criticism of the application of those principles appears to reflect his choice below to focus on the second ground of appeal: the inability to exclude the second man hypothesis. The second man hypothesis assumed, consistently with the appellant's stated belief, that the explosion was the result of the deliberate act of a human actor.

51 It remains that the issue raised by the appellant's first ground in the Court of Appeal required consideration of whether it was open to the jury to be satisfied beyond reasonable doubt that the explosion was caused by the distribution of petrol inside the house in circumstances in which: (i) there was no evidence of the presence of any petrol residues in the house; (ii) the evidence did not exclude that gas was connected to the house; and (iii) the evidence did not exclude the possibility of an electrical fire igniting whatever gaseous vapours had built up inside the house.

52 Acknowledgment that the jury had the benefit of seeing and hearing Patruno's and Dyke's evidence did not relieve the appellate court of assessing the capacity of their evidence, taken with the other circumstances on which the prosecution relied, to establish that the explosion was of petrol vapours[12]. Patruno's statement, in which he recalled a strong smell of petrol before the explosion, was made two years and four months later. There was no evidence that Patruno told the

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10 (1994) 181 CLR 487 at 493 per Mason CJ, Deane, Dawson and Toohey JJ.

11 *R v Coughlan* [2019] QCA 65 at [291]-[294], citing *M v The Queen* (1994) 181 CLR 487 at 493-494 per Mason CJ, Deane, Dawson and Toohey JJ, *SKA v The Queen* (2011) 243 CLR 400 at 408-409 [20]-[22] per French CJ, Gummow and Kiefel JJ and *R v Baden-Clay* (2016) 258 CLR 308 at 329-330 [65]-[66] per French CJ, Kiefel, Bell, Keane and Gordon JJ.

12 See *Fennell v The Queen* (2019) 93 ALJR 1219 at 1233 [81] per Kiefel CJ, Keane, Nettle, Gordon and Edelman JJ; 373 ALR 433 at 451-452.

police officer whom he spoke to within a day or so of the explosion of having smelt petrol. The police did not obtain a statement from Drayton, who was with Patruno at the time. Dyke gave inconsistent accounts of the conversation with Long concerning the smell of petrol. There is also a question of the likelihood that persons seated in a vehicle parked in the street outside the house or walking to the neighbouring house would have smelt petrol inside the house. The explosion occurred because of a build-up of gaseous vapours inside the house. Were any of the windows or doors to have been open, it might have been expected that the gaseous vapours would have tended to dissipate.

53 It may be allowed that aspects of the appellant's account of the planned meeting with the prospective purchaser of the motorcycle present as implausible. Nonetheless, it remains that such features of his account, as were able to be investigated, were confirmed.

54 Before the jury could rely on the appellant's flight from the scene in support of the prosecution case, it had to be satisfied that, in all the circumstances, there was no explanation of that conduct other than his consciousness of his guilt of arson. As Morrison JA acknowledged, the appellant might have been in a state of shock as the result of the explosion. His Honour allowed that, on the appellant's account of events, it was possible that he believed he was being followed. His Honour did accept that the appellant could have continued in that belief all the way to the Bruce Highway. Given the appellant's volatile mental state and admitted tendency to paranoia, it is not evident that his assertion that he feared he was being pursued after he reached the Bruce Highway was unworthy of belief. His presentation at the Caboolture Police Station was consistent with his account of being in fear for his safety. He was variously described by the officers who saw him as "highly agitated"; possibly in shock; and distressed. Constable Burgess accepted that he may have said, "[s]omeone tried to kill me. I went to ... sell a motor bike. The house blew up", or words to this effect. His attitude towards the police at the Caboolture Police Station was perceived by the shift supervisor to be "very helpful".

55 An assessment of the sufficiency of the evidence to support the verdict of guilt in a circumstantial case such as this one requires the appellate court to weigh all the circumstances in deciding whether it was open to the jury to draw the ultimate inference that guilt has been proved to the criminal standard[13]. That

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13 *Shepherd v The Queen* (1990) 170 CLR 573 at 579 per Dawson J; *R v Hillier* (2007) 228 CLR 618 at 637 [46] per Gummow, Hayne and Crennan JJ; *Fennell v The Queen* (2019) 93 ALJR 1219 at 1233-1234 [82]; 373 ALR 433 at 452.

inference will not be open if the prosecution has failed to exclude an inference consistent with innocence that was reasonably open.

56 The presence of petrol residues on the appellant's clothing, taken with Patruno's and Dyke's evidence of smelling petrol before the explosion, was not capable of supporting the inference beyond reasonable doubt that the explosion was of petrol vapours in the absence of any evidence of petrol residues in the remains of the house. The expert evidence did not exclude the reasonable possibility that the explosion was of a build-up of gas that was ignited by an electrical fire. The appellant's account of his reasons for being at the house that afternoon, and his conduct in the aftermath of the explosion, were not capable, when viewed with the other circumstances (the presence of the petrol residues on the appellant's tracksuit pants and shoes, and Patruno's and Dyke's evidence of smelling petrol), of excluding that possibility. That is all the more so when account is taken of the acknowledged absence of apparent financial motive for the appellant to set fire to the house.

57 It was not open to the jury to be satisfied of the appellant's guilt of either offence beyond reasonable doubt. The orders that the Court of Appeal should have made were those this Court made on 12 February 2020 quashing the convictions and entering verdicts of acquittal on each count.