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# To the exclusion of all others? DNA profile and transfer mechanics—*R v Jones (William Francis)* [2020] EWCA Crim 1021 (03 Aug 2020)

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## Abstract

This case note deals with doctrinal and inferential issues around the use of DNA in the criminal process, in particular DNA alone, as a case to answer.

## Keywords

adverse inferences, decision-making prerogative, DNA evidence, expert witness fallacy, no case to answer, procedural space of reasons, unchallenged evidence

## Summary of the case

In 2019, the appellant was convicted (by a majority of 11 to 1) on a single-count indictment alleging conspiracy to possess explosives for an unlawful purpose, pursuant to s. 1(1) of the Criminal Law Act 1977. He was sentenced at the same court (Crown Court at Liverpool) by HHJ Cummings QC to life imprisonment with a minimum term of 6 years. There were three co-accused jointly tried with the appellant on the same indictment. Each was found not guilty. All those involved in this dispute came from, and were residents in, Warrington. All the relevant events took place in Warrington, including the depositing of the grenade in question. At trial, the prosecution relied on evidence concerning a mobile phone number which had been in contact, among others, with the mobile phones of the appellant's co-accused and which might have provided a physical or temporal link between the device and the appellant. However, that evidence was abandoned as it could not be made out to the required standard.

The appeal focused primarily upon DNA evidence. Both prosecution and defence instructed DNA experts—Mr Samuel Walton for the Crown, and Dr Susan Pope for the defence. The experts met and

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reached agreed conclusions. In their Joint Statement they noted that the DNA results showed the presence of DNA from at least three people on the grenade firing pin and that all of the components in the profile of the appellant were observed in the mixed DNA result. This result meant that it was 1 billion times more likely than otherwise that this DNA was that of the appellant. They went on, stating that the 'statistical evaluation provided addresses only whether an individual could be a possible donor of DNA and does not address the mechanism by which any DNA was deposited'. Only Mr Walton gave evidence and was cross-examined. He confirmed that none of the co-accused had contributed any of the DNA found on the firing pin.

During police interview, the appellant gave no explanation as to why his DNA might appear on the firing pin of the grenade. On the contrary, he said that it was impossible for his DNA to be present on the grenade, because he had never handled a grenade. The Crown highlighted that although it was not necessary for the appellant to have himself deposited the grenade, in a general sense, all related activity took place in Warrington, where the appellant resides. They argued that there was no basis upon which to infer secondary transfer.

The counsel for the appellant conceded that there could not be a realistic challenge to the inference that the DNA sample obtained from the firing pin came from his client. However, he submitted that there was no case to answer because the DNA experts were incapable of distinguishing between a primary deposit of his DNA on the firing pin of the grenade and secondary transfer.

The trial judge observed that although there was discussion in the course of submissions, and to some extent during questioning, of theoretical scenarios which could innocently account for the presence of [the appellant's] DNA, there was no actual evidence before the jury to support any of them. The DNA evidence was thus sufficient to constitute a case to answer, and it would be open to a jury to conclude that the only explanation for the presence of the defendant's DNA on the grenade is that he was himself a party to the alleged conspiracy. The trial judge further noted that after evaluation, the conclusion was that the mixed DNA result was 1 billion times more likely if the DNA came from the appellant and two unknown and unrelated persons. He also confirmed that there was no evidential or legal principle that a case can never be left to a jury solely on the basis of the presence of the defendant's profile on an article left at the scene of a crime, but whether it will be appropriate to do so will depend on the particular facts of the case.

The appellant appealed against conviction by leave of the single judge. Although not specified, the single ground of appeal in this case seems to have been that the judge ought to have stopped the case at the close of the prosecution evidence. There was no argument that the DNA found was from the appellant, the question was whether it was likely that the DNA profile was deposited by primary or secondary transfer.

*Held*, by allowing the appeal and quashing the conviction, that the central issue in the appeal concerns the limitations and implications of DNA evidence. There was no doubt that the DNA of the appellant was on the firing pin of the grenade. The trial judge was wrong in thinking that experts can distinguish between direct and indirect deposit of DNA. The case must be distinguished from both *Tsekiri* ([2017] EWCA Crim 40) and *FNC* ([2015] EWCA Crim 1732), for, as a point of general principle, direct transfer is more likely than indirect transfer, qualified by the observation that no conclusion regarding this could be reached in relation to the individual case. The experts' joint statement according to which 'it is not realistic to expect anyone to be able to account for the ways in which their DNA may have been transferred by indirect methods', is very broadly formulated. There are many circumstances where it may be reasonable to expect an individual to put forward a case in relation to the presence of their DNA, for example, if their DNA may be explained by some 'innocent' connection or contact. Without more exploration or development, the evidence could not properly be supported by an adverse inference. In the absence of further evidence other than the DNA match, neither the judge nor the jury had the basis for reaching a safe verdict. Mere probability is insufficient for a conviction. The case turns upon its own facts. Save for remarks about joint witness statements, it does not represent guidance for other cases.

## Commentary

### General remarks

This case further demonstrates the tension around the evidential rules on the sufficiency of a sole item of DNA evidence constituting a possible case to answer, created by developments in forensic genetics enabling the extraction of DNA profiles from increasingly smaller biological samples, and the legal requirement for individualistic evidence. The tension arises when considering whether DNA evidence combined with the defendant's silence/denial of the allegations can provide a safe basis for criminal convictions. In recent years, the Court of Appeal departed from its original position (see *R v Lashley*—unreported; CPS Policy Directorate, Guidance on DNA Charging, 2004, implemented in *R v Grant* [2008] EWCA Crim 1890; *R v Ogden* [2013] EWCA Crim 1294; *R v Bryon* [2015] EWCA Crim 997), according to which DNA as a sole item of evidence provides an insufficient basis for conviction. In *FNC* ([2015] EWCA Crim 1732) the Court of Appeal adopted the opposite position (see also *R v Tsekiri* [2017] EWCA Crim 40; *R v Bech (Jordan Anthony)* [2018] EWCA Crim 448, affirming the Court of Appeal's judgement in *FNC*). Thus, it is no longer imperative that DNA evidence must be supported by some other (individualised) evidence. As Thomas LCJ put it, 'there is no evidential or legal principle which prevents a case solely dependent on the presence of the defendant's DNA profile on an article left at the scene of the crime being considered by a jury' (*Tsekiri*, at [21]). Sufficiency is to be determined in relation to a non-exhaustive list of surrounding facts of the case. The open texture of the abovementioned list makes it difficult to determine whether a certain combination of elements should constitute a case to answer and provide a safe basis for conviction.

The Court of Appeal's reassurance that *Jones* 'turns upon its own facts' [at 41] may produce aberrations from the traditional point of view of a *rule-governed* approach. But it produces consistency from the perspective of the *Tsekiri*-test according to which 'each case will depend on its own facts' (*Tsekiri*, at [21]). The risk of *ad-hoc* decision-making therefore becomes very real. A ruling ceding the normative claim that similar cases should be treated similarly (and different cases differently), raises questions as to whether the ruling itself rests upon a stable justificatory basis. The principled approach in *Jones*, therefore, where their Lordships reaffirmed that probabilistic statements yield no conclusion 'in relation to the individual case' (*Jones*, at [31]) raising thus a (general?) ban on group-mediated approaches to evidence and criminal cases, is a positive development and, arguably, a departure from *Tsekiri* and *Bech*'s probabilism (NB the Court of Appeal distinguished between *Jones* and *Tsekiri* (at [31])).

### 'Limitations and implications'

*Jones* is the latest in a series of cases in which a mixed DNA profile was the only (admissible) piece of evidence used against the appellant. In a unanimous judgement, Irwin LJ stressed that the 'limitations and implications' of the unchallenged expert evidence were central to the appeal (at [9]). Both prosecution and defence had instructed experts who agreed upon their conclusions. The latter noted that the biostatistical analysis showed the presence of DNA from 'at least three people' at the firing pin of the hand grenade and that all the components in the evidence sample (appellant) were observed in the forensic sample (at [10]). The mixed DNA result was 1 billion times more likely if the DNA came from the appellant and two unknown and unrelated persons. From the mixed DNA sample as the only piece of evidence to the likelihood ratio value the similarities between *Jones* and *Bech* are striking. We will return to this point.

Further, the experts in *Jones* made clear that the statistical evaluation does not assist in determining (*inter alia*) the mechanism by which the DNA from the appellant was deposited on the safety pin, including whether it was left directly (primary transfer) or indirectly via an intermediary transfer (at [10]). Although it was highlighted in the joint statement that the 'result obtained is with[in] the range of expectations we might have if J had direct contact with the safety pin at some stage', one of the expert witnesses stressed during cross-examination that their evaluation does not relate to any mechanisms of transfer (at [13]).

Remember that in *Bech* (conviction upheld) the Recorder had resorted to conjecture by stating that the ‘application of common sense may be capable of providing the answer’ to disputed issues over DNA transference. Accordingly, there was a clear inference, the Recorder noted, that the defendant was in the car at the time of the crash ‘due to the very fact that the defendant’s DNA was found on the centre of the airbag’ (*Bech*, at [10]). Although Irwin LJ did not rely upon *Bech* on this point, his Lordship could, (and in our opinion should), have distinguished between *Jones* and *Bech*, since applying ‘common sense’ is clearly improper here, being inappropriate for resolving the issue of applying statistical propositions to the single case to the exclusion of all others (i.e. individualisation). In *Jones* their Lordships agreed that although direct transfer was statistically more likely than indirect transfer, no categorical conclusion could be reached ‘in relation to the individual case’ (at [31]). This is a significant distinction from the position in *Bech* and *Tsekiri*. Each case may very well turn on its own facts, but the inability to apply general propositions (whether numerical or not) to the single case to the exclusion of all others is one of these evidential principles (i.e. the principle of (non-)individualisation) which do prevent—in *Tsekiri*’s terms (*Tsekiri*, at [21])—a case solely dependent on the presence of the defendant’s DNA profile on an article left at the scene of the crime being considered by a jury. This insight is crucial because it puts flesh on the *Galbraith* test: statistical evidence alone, taken at its highest, i.e. when it is fully reliable, still cannot be such that a jury properly directed could individualise it and properly convict upon it. We submit that *Jones* signals—to the extent that *Tsekiri* equates the crossing of the *statistical Rubicon* (‘1:1 billion or similar’, *Tsekiri*, at [14]) with a case to answer—a *sotto voce* shift away from *Tsekiri* & *Bech* back towards *Lashley*.

### Tactical burdens

At paragraph 12 of their joint statement the DNA experts had contended that ‘it is not realistic to expect anyone to be able to account for the ways in which their DNA may have been transferred by indirect methods’ [at 10]. Their Lordships were concerned about that display of activism by the DNA experts and aired their ‘scepticism’ regarding the ‘wisdom’ underlying the ‘breadth of the formulation’ [at 38]—understandably. The experts had trespassed upon jurisprudential territory by claiming in effect that there is no case to answer. The law in that regard has been summarised by Lord Justice Aikens in *G & F* ([2012] EWCA Crim 1756, at [36]): ‘Where a key issue in the submission of no case is whether there is sufficient evidence on which a reasonable jury could be entitled to draw an adverse inference against the defendant from a combination of factual circumstances based upon evidence adduced by the prosecution, the exercise of deciding that there is a case to answer does *involve the rejection of all realistic possibilities consistent with innocence*’ (emphasis added). Clearly, expert evidence invokes scientific, technical or other specialist knowledge lying beyond the general competence and ordinary common-sense experience of fact-finders (*R v Turner* [1981] QB 834). But forensic scientists have no expertise on making decisions under uncertainty to resolve *questions of justice*. As Lord Hughes put it pithily, experts should ‘leave ordinary words alone’ (*Golds* [2016] UKSC 61, at [37], reaffirming *Brutus v Cozens* [1973] AC 854); see also the recent ENFSI Guideline for Evaluative Reporting in Forensic Science: [1.3] ‘Forensic practitioners will not report on matters outside their own area of expertise’). Expert witnesses who spuriously opine on questions of justice go far beyond what can be logically warranted by the underlying axiomatic procedure (see Crim Practice Directions 2015, para. 19A.5(e)).

Irwin LJ thus reminded experts to confine themselves ‘to purely scientific questions, leaving open any issue as to the surrounding facts’ (at [38]). Expert witnesses who do opine on such issues commit the expert witness fallacy, i.e. working from the presupposition that some scientifically validated, statistical (general) proposition can guarantee the factual and normative rectitude of an individualistic (interim) legal decision (see Kotsoglou, 2020).

Arguably, however, the main reason for the jurisprudential rap on the knuckles was not the incursion into the fact-finders’ decisional domain. The fact that the experts opined on the appellant’s inability to explain how the DNA might have come to be on the grenade firing pin, disrupted the ‘tactical burden’

that the Court of Appeal's jurisprudence assigns to defendants (see Ward, 2016). It is hard to see, his Lordship noted, how 'such an explanation "could reasonably have been mentioned"' when there was unchallenged expert evidence to the contrary', adding repeatedly that the 'breadth of the formulation [...] was *unwise*' (at [38] - emphasis added).

It seems thus that the experts' transgression of boundaries, which was not remedied by the prosecution (by 'laying the groundwork as to why such explanation was called for', at [38]), in effect neutralised the tactical burden placed on the appellant. What remained, i.e. the statistical evaluation of the DNA match, could not, even at its height, suffice for a conviction (*R v Galbraith* [1981] 1 WLR 1039; (1981) 73 Cr App R 124 (CA)).

### *Assuming individualisation?*

To reinforce the tactical burden placed on the appellant, Irwin LJ stressed that 'there are many circumstances where it may be reasonable to expect an individual to put forward a case in relation to the presence of their DNA' (at [35], emphasis added). We submit, however, that without further corroborating (individualistic) evidence we should not speak of a (specific) person explaining 'their' DNA. Expecting an individual to put forward a positive case in relation to the presence of *their* DNA presupposes that the forensic sample has already been individualised, i.e. that someone decided it *is* their DNA. Otherwise, we simply assume the *probandum*. The Court of Appeal once again put the inferential cart before the DNA-horse—perhaps unnecessarily so in this case, given the presence of circumstantial evidence about the preceding series of tit-for-tat actions involving the appellant and victim(s).

It is clearly problematic—both inferentially and procedurally—to place the tactical burden on the defendant/appellant. Purporting to eliminate the impossible, so that 'whatever remains, no matter how improbable, must be the truth' may be useful in Sir Arthur Conan Doyle's *deductive* space of reasons; it is, however, inoperable, and arguably unlawful, in the criminal justice system of England and Wales incl. the latter's *procedural* space of reasons. An 'explanation as to how indirect transfer might have taken place' (at [37], emphasis added) is perhaps a 'fact' which the appellant failed to explain—but only on pain of inflating the semantics of basic epistemological words. An (abductive) *explanation* is not an empirical fact conducive to proof. If we accept the opposite, then one wonders what could ever stop courts invoking s. 36(1)(a)(iv) CJPOA 1994 to allow an adverse inference given that the grenade was supposedly found in the 'same place' (Warrington? Merseyside? England? UK? Europe?) as the appellant. A non-exhaustive list of 'potentially relevant considerations' which could determine the evidential sufficiency of DNA evidence pertains only to the open texture of 'sufficiency', i.e. to its long tail, not to its normative rigidity. The rule that DNA evidence *qua* biostatistical data alone—whether directly deposited or not—cannot constitute a case to answer is an inferential one. We cannot charge let alone punish someone due to their belonging to a reference class of the people whose DNA profile would match the forensic sample. For we cannot single out the appellant as the source of the DNA to the exclusion of all others insofar as we lack individualistic evidence—regardless of how high the likelihood ratio might be. With this insight *Lashley* and the CPS Charging Standards on DNA regain their conceptual bite.

Now the question remains: who is authorised to make this jump, i.e. who has the decision-making prerogative? The answer to this question (i.e. the jury) is almost indubitable but not consistently applied. In the present case, the counsel for the appellant—interestingly: in contradiction to his client's contentions—'conceded' that there could not be 'a realistic challenge to the inference that the DNA sample obtained from the firing pin came from [the appellant]' (at [18]). At the same time, the latter denied having ever handled a grenade (at [11]). However, the uncertainty surrounding the source level proposition cannot be settled by the appellant or his counsel's admissions. It is the fact-finder who is authorised to make this decision. Obviously, the appellant can admit having handled the grenade or having conspired with others (something which would have practically settled the issues around DNA evidence). What the appellant cannot do, however, is to pre-empt decisions and abrogate inferential rules for the

assessment of evidence. It is not clear in this case whether the trial judge left it to the jury to decide about the source of DNA.

### **Concluding remarks**

The grenade firing pin in the present case, like the scarf in *Ogden* or the balaclava in *Grant*, are—even when taken at their *Galbraith* highest—merely (strong) statistical evidence which cannot yield any inference to the specific individual. *Jones* is the latest in a series of cases where neither the trial judge nor the counsel for the defence ask the necessary question ‘whose DNA is this?’ (cf. Taroni et al., 2013). The focus of evidence analysis and assessment shifts rather from source to activity, i.e. one step up the inferential ladder. This includes the question: what are the mechanics by which the DNA sample was deposited? Notwithstanding the difficulty of this exercise, the question remains whether a reasonable jury is entitled to reach that adverse inference. We submit that an inference is not a blind flight; it needs to be directed at a certain individual, i.e. the appellant. What is more, a large part of evidential sufficiency hinges on the question of source which is the first necessary step on the hierarchy of propositions (source—activity—offence). No discussion about how the DNA was deposited at the crime scene should, however, distract us from that central question: whose DNA is this? In other words: the mechanics of DNA transfer may help us answer the question of source but this is not true vice versa.

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