Illinois Official Reports

Appellate Court

People v. Gonis, 2018 IL App (3d) 160166

Appellate Court Caption	THE PEOPLE OF THE STATE OF ILLINOIS, Plaintiff-Appellee, v. KENNETH D. GONIS, Defendant-Appellant.
District & No.	Third District Docket No. 3-16-0166
Filed	December 13, 2018
Decision Under Review	Appeal from the Circuit Court of Grundy County, No. 14-CF-05; the Hon. Lance Peterson, Judge, presiding.
Judgment	Affirmed.
Counsel on Appeal	James E. Chadd, Peter A. Carusona, and Adam Weaver, of State Appellate Defender's Office, of Ottawa, for appellant. Jason Helland, State's Attorney, of Morris (Patrick Delfino, David J. Robinson, and Stephanie L. Raymond, of State's Attorneys Appellate Prosecutor's Office, of counsel), for the People.
Panel	JUSTICE SCHMIDT delivered the judgment of the court, with opinion. Justices Holdridge and O'Brien concurred in the judgment and opinion.

OPINION

¶ 1 Defendant, Kenneth D. Gonis, appeals his conviction for criminal sexual assault. Defendant argues that the trial court erred in admitting into evidence the results of DNA paternity tests showing that there was a 99.9999% probability that he was the father of the victim's children. Specifically, defendant contends that the probability of paternity percentage violated the presumption of innocence because it was calculated using a prior probability. We affirm.

¶ 2 FACTS

¶ 3 A grand jury charged defendant with criminal sexual assault (720 ILCS 5/12-13(a)(3) (West 2006)) in that he committed an act of sexual penetration with his daughter, T.G., when she was under 18 years of age. The indictment alleged that the offense occurred between October 1 and November 30, 2007, when T.G. was 16 years old. T.G. had two children, J.G. and A.G. J.G. was born when T.G. was 17 years old, and A.G. was born when T.G. was 19 years old.

¶ 4 Defendant filed a motion to suppress the results of paternity tests performed on T.G.'s children. The motion argued that the tests were inconsistent with the presumption of innocence because a statistical formula used in the testing assumed a prior probability of paternity. Specifically, the motion alleged:

> "Assuming that the Northeastern Illinois Regional Crime Laboratory tested the DNA sample using widely accepted practices in the scientific community, said testing was conducted using a statistical mathematical formula. These formulae, as their basis, include a component to determine paternity which by its nature 'assumes' that sexual intercourse has in fact taken place."

The motion alleged that to allow such paternity test results would violate the presumption of innocence because "the state would be allowed to introduce statistical evidence presuming sexual intercourse, in order to prove an act of sexual intercourse."

¶ 5 At the hearing on defendant's motion to suppress, Kenneth Pfoser testified that he was the DNA technical leader of the Northeastern Illinois Regional Crime Laboratory. Pfoser's office received written DNA profiles of defendant, T.G., J.G., and A.G. from the Illinois State Police Joliet forensic science laboratory. This laboratory requested that Pfoser "test that [T.G.] was the mother of the children as well as test against [defendant] to determine if he's the alleged father of the children."

¶ 6 Pfoser testified that DNA paternity testing had three components. The first component of the test involved an exclusion analysis where Pfoser entered the DNA profiles into a computer containing a statistical calculator. If there were any inconsistencies between the alleged father and the child, the computer would give a result of "0" for paternity index. The next stage involved the calculation of the paternity index, which was a formula used to determine "the likelihood that the assumed alleged father in question is in fact a father as opposed to a random individual that's unrelated in the general population."

¶ 7 Pfoser testified that the third component of DNA paternity testing converted the paternity index into a probability of paternity percentage using a statistical, mathematical formula called "Bayes'[s] Theorem." Pfoser explained:

> "Bayes'[s] Theorem is essentially a basis for a likelihood ratio. Like I kind of described before, you're basing it on two conflicting hypotheses or two conflicting assumptions. One is that the individual in question is in fact the father as opposed to a completely random unrelated individual could be the father."

Pfoser further explained:

> "[S]o you're taking two, essentially two, calculations, one calculation is *** the prior probability or the assumed probability that the person in question is the father of the child and that is divided by the probability that some unrelated person within the same race group in the general population is the father of the child."

¶ 8 Pfoser testified that the prior probability of paternity was set at 50%. Defense counsel asked whether Pfoser presumed that there was a prior probability of sexual intercourse when he presumed that there was a prior probability of paternity. Pfoser said no. Pfoser believed that the calculation presumed only that two contributing individuals had a child, which could be a result of sexual intercourse or artificial insemination.

¶ 9 After hearing arguments and considering the case law presented by the parties, the court denied the motion to suppress. The court noted that the case law provided a thorough understanding of the DNA evidence and "both sides of the argument." The court stated that it would rely on the cases cited by the State, particularly *Griffith v. State*, 976 S.W.2d 241 (Tex. Ct. App. 1998). The court noted that the cases cited by the State explained why "the .5 number presumption that they start off with is actually just a truly neutral number. It assumes the same likelihood that the defendant was not the father of the child as it does that he would be the father of the child."

¶ 10 The matter proceeded to a stipulated bench trial. The court admitted a video recording of an interview with T.G. into evidence. Stipulations regarding the testimony of T.G., her mother, two law enforcement officers, two employees of the crime laboratory, and Pfoser were also introduced into evidence. The stipulation regarding T.G.'s testimony stated defendant began sexually molesting T.G. when she was 5 or 6 years old and engaged in sexual intercourse with her from the time she was 11 years old until she was 20 years old. The stipulation stated that defendant had sexual intercourse with T.G. in October and November 2007, and she became pregnant with her first child, J.G.

¶ 11 The stipulation regarding Pfoser's testimony stated that the parties stipulated to Pfoser's testimony from the hearing on the motion to suppress. The stipulation also stated that Pfoser would testify that he analyzed DNA data submitted by the crime laboratory and conducted a calculation estimating the probability of paternity. Pfoser determined to a reasonable degree of scientific certainty that defendant could not be excluded as the father of J.G. or A.G. The stipulation stated that "[a] probability of paternity is the percent chance that an individual could be the biological parent as opposed to another random unrelated individual in the same racial group." The stipulation further stated that Pfoser "was able to determine from his calculations that at least 99.9999% of the North American Caucasian/White men would be excluded as being the biological father of [J.G. and A.G.]" The stipulation stated that the probability that defendant was the biological father of J.G. and A.G. was 99.9999%.

¶ 12 The stipulation as to Pfoser's testimony also stated that a copy of Pfoser's laboratory report was attached to the stipulation. The laboratory report showed that defendant's DNA matched the DNA of A.G. and J.G. at 15 loci. It appears that two different databases were used to determine the paternity index. Application of the first database resulted in paternity indexes of

196,400,000 for J.G. and 26,860,000 for A.G. Application of the second database showed a paternity index of 193,700,000 for J.G. and 26,500,000 for A.G.

¶ 13 After considering the stipulated evidence, the court found defendant guilty. The court reasoned that there were "significant details" in the stipulated statement of T.G. that "len[t] to its believability." The court also noted that the paternity tests results showed that T.G. conceived a child in roughly October 2007—when she was 16 years old—and that defendant was "99.999 percent likely" to be the father. The court sentenced defendant to 11 years' imprisonment.

¶ 14 ANALYSIS

¶ 15 Defendant argues that the court erred in denying his motion to suppress the results of the paternity tests "where the results were based on a 50 percent likelihood that sexual intercourse had occurred." Defendant contends that the prior probability assumption used in paternity testing violated his presumption of innocence because it assumed that sexual intercourse occurred in order to prove that sexual intercourse occurred. We find that the court did not err in admitting the probability of paternity percentage because defendant failed to show that the use of a prior probability necessitated an assumption that he had sexual intercourse with T.G.

¶ 16 I. Standard of Review

¶ 17 Initially, the parties disagree on the applicable standard of review. The State contends that the case should be reviewed for abuse of discretion because it involves an evidentiary ruling. Defendant argues that this issue should be reviewed *de novo* because the issue is purely a question of law.

> " 'Generally, evidentiary motions, such as motions *in limine*, are directed to the trial court's discretion, and reviewing courts will not disturb a trial court's evidentiary ruling absent an abuse of discretion.' [Citation.] However, where the ruling on a motion *in limine* is based on an interpretation of law, our review proceeds *de novo*." *People v. Way*, 2017 IL 120023, ¶ 18 (quoting *People v. Harvey*, 211 Ill. 2d 368, 392 (2004)).

The trial court's ruling on the motion to suppress turned on the question of whether the prior probability figure used to calculate the probability of paternity violated the presumption of innocence. This is a legal question that we will review *de novo*. See *id.*

¶ 18 II. DNA Paternity Testing

¶ 19 Before addressing the substance of defendant's argument, we will briefly discuss the three-step DNA paternity testing process described during Pfoser's testimony and by the case law cited in the parties' briefs. The three steps in the DNA paternity testing process include: (1) determining exclusion, (2) paternity index, and (3) probability of paternity. *Ivey v. Commonwealth*, 486 S.W.3d 846, 850 (Ky. 2016).

¶ 20 During the first step—determining exclusion—the DNA examiner determines whether the child and putative father have shared or common DNA. *Id.* Specifically, "a DNA examiner compares locations on the child's and putative father's DNA—frequently called loci." *Id.* If the putative father's DNA matches the child's DNA at all of these loci, the putative father cannot be excluded as the child's father. *Id.*

¶ 21 The second step, if the putative father is not excluded, is to calculate the paternity index. *Id.* at 850-51. "[T]he paternity index is the ratio of 'the probability of the alleged father transmitting the alleles and the probability of selecting these alleles at random from the gene pool.' " *Id.* at 851 (quoting D.H. Kaye, *The Probability of an Ultimate Issue: The Strange Cases of Paternity Testing*, 75 Iowa L. Rev. 75, 89 (1989)). "The paternity index calculations utilize allele frequencies generated from established population databases, such as the FBI database." *Jessop v. State*, 368 S.W.3d 653, 668 (Tex. Ct. App. 2012). "Paternity index is determined by multiplying together all of the allele frequencies (rate of occurrence) for each region tested." *Griffith*, 976 S.W.2d at 243.

¶ 22 The paternity index is expressed as a number indicating the man is "that many more times likely to be the father than any other randomly selected male of his race." *Id.* For example, "a paternity index of 388 means that it is [388] times more likely that a union of [the defendant] and [the mother] would produce a child with the observed set of markers than would a union of [the mother] and a set of alleles picked at random from men of [the defendant's] race." (Internal quotation marks omitted.) *Ivey*, 486 S.W.3d at 851-52.

¶ 23 The third step in paternity testing is calculating the probability of paternity. *Id.* at 852. This step "translates the paternity index into a percentage that is more understandable." *Butcher v. Commonwealth*, 96 S.W.3d 3, 7 (Ky. 2002). This percentage is calculated using Bayes's Theorem, which is a mathematical formula that "combines the paternity index and another value representing the prior probability that an event occurred." *Id.* The prior probability "represents the social non-genetic evidence." *Jessop*, 368 S.W.3d at 669. The prior probability is typically determined by considering "such factors as access to the mother, fertility, and date of conception." *Butcher*, 96 S.W.3d at 7. However, "[i]n the context of criminal cases *** those using this formula to determine paternity typically insert a standard prior probability of .5 regardless of any other factors." *Id.*

¶ 24 The mathematical formula used to determine the probability of paternity is expressed as follows:

$$Probability = \frac{Paternity\ Index\ x\ Prior\ Probability}{Paternity\ Index\ x\ Prior\ Probability + (1\text{-}Prior\ Probability)}$$

Id.; *Griffith*, 976 S.W.2d at 243. The prior probability may be any number between zero and one. *Ivey*, 486 S.W.3d at 852. Inserting a prior probability of "1" would always result in a 100% probability of paternity, and inserting a prior probability of "0" would always result in a 0% probability of paternity. Thus, a prior probability of zero would mean that the putative father is definitely not the father, and a prior probability of one would mean that the putative father is definitely the father. *Id.* at 852 n.8.

¶ 25 III. Prior Probability of Paternity and the Presumption of Innocence

¶ 26 Defendant does not take issue with the admissibility of the first two steps of the paternity testing process. Rather, defendant argues that the probability of paternity percentage should not have been admitted into evidence because the prior probability figure used in that equation violated the presumption of innocence. Specifically, defendant argues that the prior probability figure encompasses an assumption that sexual intercourse occurred between defendant and T.G.

¶ 27 "[N]o rule is more firmly settled than that a defendant in a criminal case is not bound to prove himself innocent, but the State must prove him guilty beyond a reasonable doubt, the defendant being presumed innocent." *People v. Magnafichi*, 9 Ill. 2d 169, 174 (1956); see also *People v. Weinstein*, 35 Ill. 2d 467, 469-70 (1966) ("It is a fundamental doctrine of our system of criminal jurisprudence that the law presumes the innocence of an accused until he is proved guilty beyond a reasonable doubt."); *People v. Cameron*, 2012 IL App (3d) 110020, ¶ 27 ("The defendant is presumed innocent throughout the course of the trial and does not have to prove his innocence, testify, or present any evidence.").

¶ 28 We find that the admission of the probability of paternity percentage calculated using Bayes's Theorem did not violate the presumption of innocence. Defendant's argument that the prior probability figure used in Bayes's Theorem assumed that he had sexual intercourse with T.G. is not supported by the record. While Pfoser testified that Bayes's Theorem assumed that two contributing individuals created a child, nothing in Pfoser's testimony indicated that Bayes's Theorem necessarily assumed that defendant had sexual intercourse with T.G. Pfoser testified that Bayes's Theorem was a likelihood ratio based on two competing hypotheses: (1) defendant was the father, or (2) a random, unrelated individual was the father. Pfoser stated that Bayes's Theorem took "the assumed probability that the person in question is the father of the child" and divided it "by the probability that some unrelated person within the same race group in the general population is the father of the child." Thus, Pfoser's testimony indicated that Bayes's Theorem posited that either defendant or an individual other than defendant could have been the father of T.G.'s children. Logically, since Bayes's Theorem allowed for the possibility that defendant may not be the father of T.G.'s children, it did not assume that defendant necessarily had sexual intercourse with T.G.

¶ 29 While the question of whether the use of a prior probability in the calculation of the probability of paternity violates the presumption of innocence in a criminal case is an issue of first impression in Illinois, we find the support for our holding in the opinion of the Court of Appeals of Texas in *Griffith*, 976 S.W.2d 241. In *Griffith*, the defendant argued that the trial court erred in denying his motion to suppress the admission of the probability of paternity statistic at trial because the calculation was based on a presumption of guilt. *Id.* at 242. The *Griffith* court held that "the use of a probability of paternity statistic based on Bayes' Theorem in a criminal proceeding does not violate the presumption of innocence." *Id.* at 247. The *Griffith* court reasoned: "The probability of paternity *** is merely a way of expressing and interpreting the actual DNA test results. Thus, the statistic itself does nothing to shift the burden of going ahead to the defendant." *Id.* at 249. The *Griffith* court rejected the defendant's argument that the prior probability used in calculating probability of paternity assumed that the defendant had sexual intercourse with the victim. *Id.* at 248. The court reasoned: "Logically, the prior probability assumes intercourse *could* have occurred and thus the putative father could be the actual father, but the statistic does not necessarily assume intercourse *did* occur." (Emphases in original.) *Id.*

¶ 30 We find the reasoning set forth in *Griffith* to be persuasive. We note that other courts have reached the same holding as in *Griffith*. See *Butcher*, 96 S.W.3d at 9; *Jessop*, 368 S.W.3d at 677-78.

¶ 31 In reaching our holding, we reject defendant's reliance on *State v. Hartman*, 426 N.W.2d 320 (Wis. 1988). In *Hartman*, the court held that the use of a prior probability figure violated the presumption of innocence because it assumed that sexual intercourse occurred in order to

prove that sexual intercourse occurred. *Id.* at 326. The *Hartman* court noted that a 50% prior probability "assumes a 50 percent likelihood that the defendant is the father, and a 50 percent likelihood that a randomly selected man is the father." *Id.* The *Hartman* court reasoned: "In other words, the probability of paternity is calculated based upon the assumption 'that the mother and putative father have engaged in sexual intercourse at least once during the period of possible conception.' " *Id.* (quoting *In re Paternity of M.J.B.*, 425 N.W.2d 404, 409 (Wis. 1988)). This reasoning is illogical. An assumption that there is a 50% likelihood that a defendant was the father of the child in question and a 50% likelihood that another man was the father of the child does not necessitate an assumption that the defendant had sexual intercourse with the mother at least once during the possible period of conception. Indeed, it allows for the possibility that the defendant did not have sexual intercourse with the mother at all. The 0.5 figure used simply allows for the equal possibility that defendant or some other male of the same race had intercourse with the mother.

¶ 32 We also reject defendant's reliance on *State v. Skipper*, 637 A.2d 1101 (Conn. 1994). Unlike the *Hartman* court, the *Skipper* court acknowledged that Bayes's Theorem did not assume that the defendant necessarily had sexual intercourse with the victim. *Id.* at 1106-07. Nevertheless, the *Skipper* court held that the probability of paternity statistic was inconsistent with the presumption of innocence because it was based on an "assumption that there is a substantial possibility that the defendant had intercourse with the victim." *Id.* at 1107. The *Skipper* court reasoned:

> "[W]hen the probability of paternity statistic is introduced, an assumption is required to be made by the jury before it has heard all of the evidence—that there is a quantifiable probability that the defendant committed the crime. In fact, if the presumption of innocence were factored into Bayes' Theorem, the probability of paternity statistic would be useless. If we assume that the presumption of innocence standard would require the prior probability of guilt to be zero, the probability of paternity in a criminal case would always be zero because Bayes' Theorem requires the paternity index to be multiplied by a positive prior probability in order to have any utility. [Citation.] 'In other words, Bayes' Theorem can only work if the presumption of innocence disappears from consideration.' " *Id.* at 1107-08 (quoting Randolph N. Jonakait, *When Blood Is Their Argument: Probabilities in Criminal Cases, Genetic Markers, and, Once Again, Bayes' Theorem*, 1983 U. Ill. L. Rev. 369, 408 (1983)).

¶ 33 We disagree with the *Skipper* court's position that the presumption of innocence would require the prior probability of paternity to be set at zero. As the *Griffith* court noted, "[a] zero prior probability does not simply presume a defendant is innocent. Rather, a zero probability, in fact presumes that it was *impossible* for the defendant to be the father." (Emphasis in original.) *Griffith*, 976 S.W.2d at 249. While the presumption of innocence requires the finder of fact to assume that a defendant is innocent unless the State has proven otherwise, we agree with the *Griffith* court that it does not require the fact finder to assume that it was impossible for the defendant to commit the offense. See *id.*

¶ 34 Finally, we need not reach the issue of whether a 50% prior probability is a neutral number in deciding this appeal. We note that the cases cited by the parties are divided on this issue. See *id.* at 248 (holding that a prior probably of 0.5 was neutral); *Jessop*, 368 S.W.3d at 675-76 (same); *Butcher*, 96 S.W.3d at 9. But see *Ivey*, 486 S.W.3d at 855 (stating in *dicta* that "the notion that [a 50% prior probability] is neutral is demonstrably false"). Here, defendant does

not argue that a different prior probability should have been used in calculating the probability of paternity. Rather, he argues that the use of any prior probability has no place in criminal law because it violates the presumption of innocence. We have rejected this argument. Indeed, the use of a low prior probability in calculating the probability of paternity would be of little aid to defendant. For example, if a prior probability of 0.00001 (.001%) rather than 0.5 (50%) were used, the probability of paternity for each child would still exceed 99%.

¶ 35 CONCLUSION

¶ 36 For the foregoing reasons, the judgment of the trial court is affirmed.

¶ 37 Affirmed.