

1965

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Recommended Citation

Hieronymus, Paul (1965) "Blood Grouping Tests and the New Kentucky Solution," *Kentucky Law Journal*.
Vol. 53: Iss. 4, Article 7.

Available at: <https://uknowledge.uky.edu/klj/vol53/iss4/7>

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BLOOD GROUPING TESTS AND THE NEW KENTUCKY SOLUTION

"A trial of bastardy is a trial of the blood."¹ This statement was uttered by an English jurist in 1679. Long before modern scientific analysis of blood and blood typing, the peoples of early times put an almost mystical importance in the blood. In modern times medical science has devised methods of grouping blood characteristics which are inheritable. The results of these blood grouping tests have become most useful in courts of law—for identification purposes, in criminal cases, and especially in cases where the paternity of a child is in issue.

What Are Blood Grouping Tests:

Inheritable qualities of human beings are transmitted from parents to children by certain chromosomes of germ-cells and more specifically by tiny particles known as genes, which are components of the chromosomes. Certain genes on certain chromosomes determine the blood type in a particular blood group or blood series.² It is a general rule of inheritance that these blood groups cannot be changed and an individual cannot transmit to an offspring any blood group which is lacking in himself.³

The characteristics which dictate the type blood within a blood group are manifested by different developments within the red blood cells, which can be determined by certain laboratory procedures. There are seven known blood groups or systems, but for practical reasons medicine and law are usually concerned only with three—the ABO series, the MN series, and the Rh series, all of which have been well proved and for which accurate tests have been formulated.

To briefly illustrate the scientific process involved, we shall examine the ABO series. Within this series there are four possible blood types—O, A, B, and AB.⁴ Every individual belongs to one of these four groups.⁵ Two types of sera have been developed to determine blood type in the ABO series. These sera are known as anti A and anti B. To make the test two drops of blood from the individual to be typed are placed on a slide. Anti A sera is added to one drop and anti B sera is added to the other. The samples are then viewed under a strong light or a low powered microscope. If there is a clumping or

¹ 12 Edw. II 388.

² Deaton, *Blood Grouping Tests Explained*, 27 Can. B. Rev. 537, 539 (1949).

³ *Ibid.*

⁴ *Ibid.*

⁵ Forty-five per cent of the population fall into group O, forty-two per cent of the population fall into group A, ten per cent belong to group B, and the remaining three per cent are in group AB. Richardson, *Modern Scientific Evidence* 321-322 (1961).

agglutination of the blood there is a reaction to the serum. Type O is determined by an absence of reaction with either sera; type A is determined by a reaction only with anti A sera; type B is determined by a reaction only with anti B; and type AB is indicated by a reaction with both sera.⁶

There are two fundamental rules of inheritance involved in the ABO series. (1) Group A or B cannot appear in the blood of a child unless present in the blood of one or both parents. (2) A parent belonging to group AB cannot give rise to a group O child, and a group O parent cannot give rise to a group AB child.⁷

Based on these rules and verified by many case studies a very accurate inheritance scale has been formulated for the ABO series.⁸

Parental Groups	Children Possible	Children not Possible
OxO	O	A,B,AB
OxA	O,A	B,AB
AxA	O,A	B,AB
OxB	O,B	A,AB
BxB	O,B	A,AB
AxB	ALL	NONE
OxAB	A,B	O,AB
AxAB	A,B,AB	O
BxAB	A,B,AB	O
ABxAB	A,B,AB	O

According to the above ABO rules, a study of 16,987 cases by Anderson, reported in 1930, revealed no actual exceptions.⁹ It has been estimated that the results of this series is over 99.99 per cent accurate.¹⁰

In the other major blood groups—MN and Rh, the technical testing procedure is basically the same, and their reliability is comparable to that of the ABO series.

It is evident that blood grouping tests cannot be used in paternity cases to definitely identify the father of the child involved, but only to exclude some of those wrongly accused. The helpfulness of this negative, back-door approach is expanded when several tests are used, and when the accused father is in a rarer blood type in one or more of the blood groups tested. Using the ABO test alone, only an average of one in six wrongly accused men can be scientifically excluded from being the father of a child in question.¹¹ However, using a combination of the ABO test with subgroups, the MN test, and the Rh factor, it is possible to exclude an average of a little over fifty per cent of wrongfully accused fathers.¹²

⁶ Deaton, *supra* note 2, at 540-541.

⁷ *Id.* at 542.

⁸ *Id.* at 542 lists the following scale.

⁹ *Id.* at 542-543.

¹⁰ Richardson, *supra* note 5, at § 12.20a 1963 Supp.

¹¹ Deaton, *supra* note 2, at 545.

¹² 32 Va. L. R. 886, 901.

Blood tests conducted by qualified experts with the results tested against control factors and with the agreement of other experts in corresponding tests are about as scientifically reliable as possible and certainly more reliable than ordinary testimony. Yet, one slight bit of caution should be noted: There is a very slight possibility of mutation in the offspring, the chance of which has been put at over 10,000 to one.¹³

The most common use of blood grouping tests, and the use with which we are concerned, is in excluding the paternity of a particular individual in a paternity or child support proceeding. Even with the established accuracy of blood grouping tests, there have been several major problems when using the results as evidence.

Can Blood Grouping Tests Be Compelled To Be Made?

In *Cortese v. Cortese*,¹⁴ it was held that in the absence of any worthy reason for refusing to take a blood test, a denial of the husband's motion for an order to compel the wife and child to take such a test was an abuse of judicial discretion.

In *Commonwealth v. Stappen*,¹⁵ the court interpreted a statute requiring blood tests in situations where the paternity of a child was at issue to be applicable in a non-support case.

However, in *O'Brien v. O'Brien*,¹⁶ also a support case, a blood test was held not required to be made under a statute authorizing such a test where paternity was in issue because the presumed legitimacy of children born in wedlock established paternity, therefore, paternity was not in issue. The strong presumption of legitimacy where a child is born in wedlock is a problem which runs throughout all aspects of blood grouping evidence. The more enlightened view of compelling a blood test in such a situation seems now to prevail, but of the older cases, the majority are *contra*.

Admissibility Of Blood Grouping Evidence

Blood grouping evidence has been admissible in European courts since 1924. However, it was not until 1933 that the issue came before a court of last resort in the United States. In *State v. Damm*,¹⁷ it was held that blood tests should not have been ordered and that the results should not have been admitted into evidence because the scientific accuracy of the tests had not been established.

¹³ Richardson, *supra* note 5, at § 12.20a 1963 Supp.

¹⁴ 10 N.J. Super. 152, 76 A.2d 717 (1950).

¹⁵ 143 N.E.2d 221 (Mass. 1957).

¹⁶ 136 A.2d 451 (Pa. 1957).

¹⁷ 62 S.D. 123, 252 N.W. 7 (1933).

It was not long until American courts recognized the scientific accuracy of blood grouping tests. If it is shown that correct scientific procedure was employed in the tests, and if the jurisdiction involved doesn't adhere to the absolute presumption of wedlock legitimacy, blood test results showing a positive exclusion can be introduced in all civil cases involving paternity.

A major problem is whether test results may be admitted where there is no positive exclusion. A lay jury may give undue weight to the scientific evidence that a certain individual could have been the father, failing to consider that fifty per cent of the male population could also have been the father. Because of this, it has become the general rule that a trial court cannot admit blood test evidence showing that an accused could have been the father of the child in question.¹⁸

Conclusive Weight Given Blood Grouping Test Results

The earlier cases on this point usually adhere to the view that blood test results are not conclusive and binding upon the jury and the court.

In *Arais v. Kalensnikoff*,¹⁹ blood test results were introduced which showed that neither the father nor the mother had type B blood. The child had type B blood; therefore, the defendant could not possibly have been the father. The jury returned a verdict for the mother which was upheld on appeal. The court said, ". . . When there is a conflict between scientific testimony and testimony as to the facts, the jury or trial court must determine the relative weight of the evidence."²⁰

In *Berry v. Chaplin*,²¹ where the defendant had type O blood and the mother type A, the child was type B—thus there was a positive exclusion. This was ignored by the jury and upheld on appeal. The court said, ". . . the law makes no distinction between expert evidence and that of any other character. . . ."²²

But such a turning of the judicial back on scientific knowledge and blood test results is not confined to the older cases. The 1957 Wisconsin decision, *Prochnow v. Prochnow*,²³ goes just as far. This was an action for divorce and a bastardy proceeding. The husband claimed

¹⁸ *Miller v. Domanski*, 97 A.2d 641 (N.J. 1953). Richardson, *supra* note 5, at 331.

¹⁹ 74 P.2d 1043 (Calif. 1937).

²⁰ *Id.* at 1046.

²¹ 74 Cal. App. 2d 652, 169 P.2d 442 (1946).

²² *Id.* at 451.

²³ 274 Wis. 491, 80 N.W.2d 278 (1957).

not to be the father of his wife's child, and the blood test results scientifically confirmed his claim. The child was a full term infant, but was born eight months after the husband's only possible intercourse with his wife in the fourteen months before the child's birth. The court found the husband was the father of the child. This ruling was upheld on appeal, the court reasoning:

This Statute (to direct blood tests to be made and received in evidence) does no more than to admit the test and its results in evidence, there to be given such weight and credibility in competition with other evidence as the trier of fact considers it deserves. No doubt in this enactment the legislature recognized that whatever infallibility is accorded to science, scientists . . . retain the fallibilities of other witnesses."²⁴

Not all jurisdictions have so summarily dismissed absolute scientific proof, however. In *Ross v. Marx*, the court said:

It is universally accepted in medical and scientific fields that the result of a blood grouping test disproving paternity . . . is not an expression of opinion upon which experts can differ, but, rather is the statement of a scientifically established fact . . . as such it should be accepted by the courts of law. For a court to declare that these tests are not conclusive would be an unrealistic as it would be for a court to declare that the world is flat."²⁵

In *Commonwealth v. Coyle*,²⁶ the defendant was scientifically excluded from being the father of a child in a bastardy proceeding, but the jury concluded that he was. On appeal this finding was reversed and the case remanded because the court was of the opinion that the jury finding was against the weight of the evidence, i.e. the blood test results.

The old problem of the strong presumption of legitimacy of a child born in wedlock arises again in cases on the conclusive weight of blood tests.

In *Schulze v. Schulze*,²⁷ the husband sued for absolute divorce and for termination of the legitimacy of the child. On appeal the court recognized that the presumption of legitimacy of children born in wedlock is one of the strongest known to the law, but held that a blood test exclusion was sufficient to overcome this presumption. In *Beck v. Beck*,²⁸ where a husband sought to be excluded from the paternity of his wife's child, the court gave a judgment *non obstante veredicto* for the husband on the basis of a blood test exclusion.

As we have seen, decisions on blood test results are in conflict.

²⁴ *Id.* 80 N.W.2d 278 at 280, 281.

²⁵ 21 N.J. Super. 95, 90 A.2d 545, 546 (1952). As quoted in Richardson, *supra* note 5, at 338.

²⁶ 154 A.2d 412 (Pa. Super. 1959).

²⁷ 35 N.Y.S.2d 218 (1942).

²⁸ 384 P.2d 731 (Colo. 1963).

Many of the cases cited above were decided under some type of statute, and many decisions hinge on whether the child in question was born in or out of wedlock. With these conflicting results in mind, let us turn to an examination of the Kentucky law on the subject.

The Court of Appeals of Kentucky has considered no cases concerning blood group evidence in civil cases. This is surprising as a fair number of bastardy actions have reached the court and it is thought that such a case is long overdue.

Prior to 1964, the only legal tool with which a party in Kentucky could compel blood tests to be made was Rule 35.01 of the Kentucky Rules of Civil Procedure, which provides that in any action in which the mental or physical condition of a party is in controversy, the court in which the action is pending may order that party to submit to an examination by a physician. It is possible that this rule might be interpreted to apply to the blood type of a party when that blood type would be necessary to disprove the paternity of a child in question. No Kentucky cases have equated blood type with physical condition, but decisions in other jurisdictions with rules similar to 35.01 have done so and compelled blood tests to be made.²⁹ If this rule can be used to compel tests to be made, it follows that the results can be introduced into evidence. If blood tests are taken and show a positive exclusion of paternity in a bastardy proceeding, there is little doubt that they could be introduced anyway, as the evidence may easily be shown to be relevant and competent. However, introduction of such evidence in a divorce action might be held to be irrelevant because of the presumption of legitimacy of children born in wedlock.

In Kentucky, prior to 1964, blood grouping evidence would probably not have been given conclusive weight. The standard bastardy instruction is: "If the *jury* believe from the *evidence* that the defendant is the father of the boy born to,, 19....., then they will find the defendant guilty of bastardy as charged in the warrant herein. But unless the jury so believe from the evidence they will find the defendant not guilty and so write their verdict."³⁰

In 1964 the Kentucky legislature adopted the Uniform Act on Paternity into the bastardy chapter of the Kentucky Revised Statutes.³¹ The important provisions thereof follow:

²⁹ *Lue Chow Kon v. Brownell*, 220 F.2d 187 (2nd Cir. 1952); *Beach v. Beach*, 72 App. D.C. 318, 114 F.2d 478 (1940); *United States v. Shaughnessy*, 220 F.2d 537 (2nd Cir. 1955).

³⁰ 1 Stanley, *Instructions to Juries* 294 § 160 (2d Ed.), citing *Maheer v. Com.*, 242 Ky. 51, 45 S.W.2d 465 (1932).

³¹ Ky. Rev. Stat. Ch. 406.

KRS 406.081 Authority for blood tests. The court, upon timely motion of the defendant, shall order the mother, child and alleged father to submit to blood tests. If the mother refuses for herself or on behalf of the child to submit to such tests, the court may resolve the question of paternity against the complainant unless such action is brought by an agency substantially contributing to the support of the child.

KRS 406.111 Effect of blood test results. If the court finds that the conclusions of all the experts, as disclosed by the evidence based upon the tests, are that the alleged father is not the father of the child, the question of paternity shall be resolved accordingly. If the experts disagree in their findings or conclusions, the question may be submitted upon all the evidence. If the experts conclude that the blood tests show the possibility of the alleged father's paternity, admission of this evidence is within the discretion of the court, depending upon the infrequency of the blood type.

KRS 406.091 provides that the court shall appoint a number of qualified experts to be called by the court as witnesses which shall be subject to cross-examination, and also gives the defendant leave to call his own experts to make independent tests.

Does the above enactment solve the blood grouping test problems in Kentucky? The answer is *no*. In the first place a defendant in a bastardy action is not assured of having a test made. The statute provides that the court shall order the test to be made, but if the mother refuses, the court *may* resolve the question in defendant's favor. The statute would be much more effective if the word "shall" was substituted for the word "may", thus not leaving this crucial point to the discretion of a court which is likely to turn the issue over to a mother-sympathizing jury. It should also be noted that if the action is brought by an agency substantially contributing to the support of the child, the defendant and the court have no resort if the mother refuses to submit to the tests.

The Uniform Act on Blood Tests to Determine Paternity³² reaches a much more desirable result by providing that a court shall upon motion of any party order to test to be made and if a party refuses the court may resolve the question of paternity against him, or if justice requires, enforce its order to submit to the tests.

The new Kentucky statute provides that if all the experts agree that the defendant could not be the father of the child, the issue shall be resolved accordingly. This gives blood test exclusions absolute conclusiveness. Obviously, this is a much more desirable result than allowing juries to disregard such absolute scientific proof. However, as mentioned previously, there is a very slight chance of mutation which might affect blood test results. In order to provide for the one

³² Uniform Act on Blood Tests to Determine Paternity § 1, 9 Uniform Laws Anno.

in 10,000 chance of mutation, the statutory language might be qualified somewhat to read as follows. "After all the evidence is in, if all the experts agree on an exclusion, if the court, disregarding the blood test evidence, would be justified in directing a verdict for the mother and child, the blood tests should be submitted to the jury to consider along with other evidence. But if the court would not be justified in so directing a verdict, the results of the blood tests should be taken as conclusive.

Thus has the legislature attempted to solve the problems of the blood grouping test. But the statute addresses itself only to bastardy actions. The issue of paternity frequently arises in divorce and support cases. KRS 406.101, which restricted the classification of bastards to (1) one born out of wedlock, or (2) one whose mother was divorced on grounds of her being pregnant with it by one other than her husband, was repealed in 1964. This might make the mechanics of the bastardy section open to all child support proceedings, but this is doubtful.

The blood test problem still remains in divorce cases, and the presumption of legitimacy of children born in wedlock presents further problems. If a husband is attempting to get a divorce on the grounds of adultery, because his wife is carrying or has borne a child he knows, is not his, his only proof may well be a blood test exclusion. In order for him to have blood tests made, he must first obtain blood samples from the wife and child. If the wife refuses to submit, there is no way for him to obtain evidence as, clearly, KRS 406.081 would not apply, and it is doubtful whether he could obtain this evidence by use of Civil Rule 35.01. The Uniform Act on Blood Tests to Determine Paternity solves this problem by permitting the court to order blood tests in all cases where paternity is a relevant fact³³. It seems that the Kentucky legislature would have done well to include this phrase in KRS 406.081 in order to extend the coverage of blood tests to other areas where paternity may be just as much in issue as in bastardy actions.

In support and divorce cases, where the bastardy statutes are not applicable, there remains the problem of the presumption of legitimacy of children born in wedlock. In the past, Kentucky adhered to the view that when a child is born after marriage, during wedlock, within a usual period of gestation where the husband had access, the child is conclusively presumed to be legitimate.³⁴ This view has been

³³ *Id.* § 1.

³⁴ *Buckner's Adm'rs v. Buckner*, 120 Ky. 596, 87 S.W. 776 (1905); *Vanover v. Steele*, 173 Ky. 114, 190 S.W. 677 (1917).

relaxed in more recent years, and now the presumption can be rebutted, but only by the strongest sort of proof, evidence so convincing as to remove the question from the realm of reasonable doubt.³⁵ The bastardy statute will not reach these situations, but if it were made applicable as recommended above, would the presumption of legitimacy outweigh the statute on the issue of conclusiveness? Seemingly no—but it would not hurt to add a section to the statute as is done in the Uniform Act on Blood Tests to Determine Paternity³⁶ to expressly provide for the overcoming of this presumption upon the agreement of all the experts.

The Kentucky legislature has recognized that blood test results present a problem which in the interests of expediency and justice needs statutory provision and regulation. However, it has restricted its attempted solution to a specific class of cases. As the law is now, a blood test result may be conclusive in one case and not in another, due to the style of the action. The blood test statute should be extended to all cases where paternity is a relevant fact, the tests should be absolutely compelled to be made, or the paternity should be definitely decided against the party refusing to take the test, and the conclusiveness given results should be made slightly less absolute.

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³⁵ *Boyers v. Boyers*, 283 Ky. 1, 140 S.W.2d 646 (1940); *Gross v. Gross*, 260 S.W.2d 655 (Ky. 1961).

³⁶ Uniform Act on Blood Tests to Determine Paternity, *supra* note 31, at § 5.