Justice through Science: The Blood Grouping Test

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NOTES

JUSTICE THROUGH SCIENCE: THE BLOOD GROUPING TEST

INTRODUCTION

In the latter part of the 1930's the law reviews of this country began a crusade; the purpose was an attempt to bring about the adoption of the use of blood grouping tests in paternity actions. Although the goal was only partially achieved, the first phase on the long and difficult road toward complete acceptance by the judiciary was begun.

The author will not attempt to give a complete picture of the use, objections, and problems concerned with the test; that has already been done and will be done again. The purpose of this note is threefold. First, an attempt will be made to present a concise study of the test including the most recent developments on the subject. It will be necessary to review the medical background and history of the test, although an extensive or exhaustive study would be impossible due to the limited scope of this note. With many members of the legal profession, misconceptions as to the value of the test, as well as its reliability, persist. The resolving of these misconceptions will be the secondary purpose of this article. The third and perhaps most important objective is to present to the bench and bar of South Carolina the general concepts of blood grouping tests and the promotion of interest in the subject with the view towards it's future adoption in this state.

HISTORY

In 1901, Dr. Carl Landsteiner announced to the world that he had discovered a substance in the blood which he called agglutinogens. He further announced that each person had one of four types of this substance and that if blood of one type were mixed with that of another, agglutination of blood clotting would take place. The secret of blood transfusions was at last revealed. Later it was found that the blood contained other elements; one such element was called M and N while another was designated rh. These elements along with the originally discovered agglutinogens of Landsteiner, which he named A and B, were found to follow the Mendelian laws

1. 26 HYGEIA 630 (1943).
of inheritance. This was not discovered by one or even a thousand tests, and it was only after years of research that the medical profession accepted the principle.\(^2\) The blood grouping test today is really divided into three separate subtests: The Landsteiner-Bernstein (the test using the A, B principle); the Landsteiner-Levine (the test using the M, N principle); and the Landsteiner-Weiner (the test using the rh principle).\(^6\) If any one of the above tests proves that a person could not be the parent of a child, the medical profession as well as a growing number of jurisdictions accept that showing as conclusive proof.\(^4\)

Although many European countries have used blood grouping tests in paternity actions for many years, it was not until the 1930's that American jurisdictions recognized their value.\(^5\) One of the earliest reported cases in the United States is that of Commonwealth v. Zamferilli.\(^6\) The court therein allowed the test as evidence of non-paternity and although the results of the test showed a definite exclusion, the defendant was convicted. This case, however, was reversed on appeal. In 1933, the South Dakota court ordered a blood test to be taken in the case of State v. Damm,\(^7\) holding that it had the inherent power to do so even in the absence of a statute. In 1934, New York passed a statute giving the court authority to order blood tests in appropriate cases.\(^8\) In the same year, Justice Steinbrink of the Kings County Supreme Court allowed the test to be admitted as evidence for the first time in the New York court in the case of Beuschel v. Manowitz.\(^9\) On appeal the superior court completely misconstrued the statute and reversed the holding. The court's reason for the reversal was based on the assumption that the statute was designed to protect a child from possible bastardization by a parent in a suit against his spouse, and immediately following the decision in the Beuschel case, two other cases were reversed upon the same ground.\(^10\) In 1935 three additional statutes were passed to rectify the mistaken view taken by the courts, and to answer criti-

\(^{2}\) Blood Grouping Test, 170 LIT. DIGEST 17 (Jan. 1934).
\(^{3}\) 23 TULANE L. R. 397 (1948). For an extensive discussion of the medical aspects see: Heise, Some Medico-Legal Aspects of Isoagglutination, 4 AMERICAN JOURNAL OF CRIMINAL PATHOLOGY 397 (1934).
\(^{5}\) Schumacher, Iso-Agglutination Test as Evidence in Judicial Proceedings in German Courts to Determine Parenthood, 8 ST. JOHN'S L. REV. 276-284 (1934).
\(^{7}\) 62 S. D. 123; 266 N. W. 667 (1933).
\(^{8}\) CIVIL PRACTICE ACT OF NEW YORK § 306 (1934).
\(^{9}\) 241 App. Div. 388; 272 N. Y. S. 165 (1934).
cism that in those instances where the test showed no exclusion, the defendants case would be materially prejudiced. The statute provided that the results of the test would be inadmissible as evidence where no exclusion was found.\textsuperscript{11} From 1935 until the present day, New York has been the leader in blood test legislation.

Legal writers had raised the "hue and cry" for the adoption of the use of blood tests some years before the New York statutes were enacted.\textsuperscript{12} In 1926 Blewett Lee presented to the American Bar Association an article upon the value and possibilities of blood tests,\textsuperscript{13} and even at this early date Lee was very enthusiastic about the advisibility of its use in paternity proceedings.

Strangely enough, the courts were concerned in the early cases, not so much with the reliability of the test, but with the question of whether or not the legislature or courts had the power to require the parties to an action to submit to a physical examination.\textsuperscript{14} Lee answered that by saying, "... in short the requirement of a drop of blood for the purpose of ascertaining paternity is with the legislative province of the court either in civil or criminal cases, and should be made whenever the ends of justice make a blood test desirable."\textsuperscript{15} However, the problem of the courts power in such situations is still very much in question and will be discussed at a later point in this note.

\textbf{MEDICO-LEGAL EXPLANATION}

\textit{The blood test cannot be used to determine paternity, but only to prove non-paternity.}\textsuperscript{16} This fact cannot be over-emphasized and must always be kept in mind in any consideration of the subject. When the test results in a positive exclusion, this is conclusive evidence. For, it is a medical impossibility for a person with a particular type blood to have a child of a dissimilar blood type.\textsuperscript{17} This is not to say, however, that where the accused is innocent the test will always show non-paternity, as there is a distinct possibility that a person who is not the father would by chance fall into the same blood group as the real father. By the use of the AB test, the chances of proving non-paternity are only 33\%; by the use of the MN test


\textsuperscript{12} 9 St. John's L. Rev. 102 (1934); 32 Mich. L. Rev. 987 (1934).

\textsuperscript{13} Lee, \textit{Blood Test for Paternity}, 12 A. B. A. J. 441 (1926).

\textsuperscript{14} \textit{Ibid.} See also, Note 7, supra.

\textsuperscript{15} \textit{Ibid.}

\textsuperscript{16} Note 12, supra.

\textsuperscript{17} Wetebsky and Wylegela, \textit{Blood Grouping and Typing Test in Affiliation Cases} (Pamphlet, which may be obtained by writing Judge Wylegela, c/o Children's County Court, Erie County, Buffalo 2, New York).
only 12%, and by the rh test 25%. However, when all three tests are carried out in conjunction, the chances of proving that a falsely accused man is not the father of the child is 45%. The figure 45% does not relate to the accuracy of the test for it is 100% accurate when an exclusion is shown, but due to the fact that a large segment of the population falls into one or more of the common blood type groups, it is impossible to obtain an exclusion in more than 45 out of 100 cases regardless of the defendant's innocence.

The charts below have been devised by Dr. Ernest Witebsky of the University of Buffalo School of Medicine to facilitate the medico-legal application of blood grouping tests. The letters A, B, AB, O and M,N refer to the different agglutinogens found in the blood.

**AB Chart**

<table>
<thead>
<tr>
<th>Blood groups of parents</th>
<th>Possible blood groups of children</th>
<th>Impossible blood groups of children</th>
</tr>
</thead>
<tbody>
<tr>
<td>O x O</td>
<td>O</td>
<td>A, B, AB</td>
</tr>
<tr>
<td>O x A</td>
<td>O, A</td>
<td>B, AB</td>
</tr>
<tr>
<td>O x B</td>
<td>O, B</td>
<td>A, AB</td>
</tr>
<tr>
<td>O x AB</td>
<td>A, B</td>
<td>O, AB</td>
</tr>
<tr>
<td>A x A</td>
<td>O, A</td>
<td>B, AB</td>
</tr>
<tr>
<td>A x B</td>
<td>O, A, B, AB</td>
<td>............</td>
</tr>
<tr>
<td>A x AB</td>
<td>A, B, AB</td>
<td>O</td>
</tr>
<tr>
<td>B x B</td>
<td>O, B</td>
<td>A, AB</td>
</tr>
<tr>
<td>B x AB</td>
<td>A, B, AB</td>
<td>O</td>
</tr>
<tr>
<td>AB x AB</td>
<td>A, B, AB</td>
<td>O</td>
</tr>
</tbody>
</table>

*The letter O denotes a neuter element in the blood.

**MN Chart**

<table>
<thead>
<tr>
<th>Blood types of Parents</th>
<th>Possible Blood Types of children</th>
<th>Impossible Blood Types of children</th>
</tr>
</thead>
<tbody>
<tr>
<td>N x N</td>
<td>N</td>
<td>M and MN</td>
</tr>
<tr>
<td>N x M</td>
<td>MN</td>
<td>M and N</td>
</tr>
<tr>
<td>N x MN</td>
<td>N and MN</td>
<td>M</td>
</tr>
<tr>
<td>M x M</td>
<td>M</td>
<td>N and MN</td>
</tr>
<tr>
<td>M x MN</td>
<td>M and MN</td>
<td>N</td>
</tr>
<tr>
<td>MN x MN</td>
<td>M, N, and MN</td>
<td>............</td>
</tr>
</tbody>
</table>

18. 125 J. A. M. A. 495 (1944).
19. Note 17, supra.
20. Ibid.
These charts will illustrate the cases wherein it would be impossible for a defendant to be the father of a child. An examination of the charts will demonstrate the general principles heretofore discussed with their practical application.

In Saks v. Saks, Justice Parker quoted the testimony of Dr. Alexander S. Weiner, outstanding authority on blood grouping tests, in rendering the courts opinion, and this testimony is perhaps one of the most lucid explanation of the "whys" and "wherefores" of the theory of blood grouping tests. Testified Dr. Weiner, "if you visualize a red cell as a bag containing the hemoglobins, the outside envelope has to have a structure, and that structure is like a patchwork, like a crazy quilt, a patch here and patch there. Now these patches we cannot chemically identify but apparently each has a separate structure so that a special serum will hook on to the patch and clamp on it. Now one type of patch determines the a and b; a different kind of patch determines the M and N; and the third type of patch determines the rh and the hr. The determination of the type of blood is fixed by the serum used".

**USE OF THE BLOOD TESTS IN THE COURTS**

It would not be false to assume that the great majority of the courts in the United States would admit blood grouping tests where revelent if they could be obtained by the mutual assent of the parties. However, the problem is in obtaining the necessary assent. This problem has been met in twelve jurisdictions, for the courts of these jurisdictions now have the power to order that a blood test be taken either upon the motion of one of the parties or whenever the court believes that the test is necessary in the determination of some issue before it. In eight of these jurisdictions, statutory power has been conferred, and in three others and the District of Columbia, the courts have claimed that authorization through their inherent power.

In State v. Damm the court held that it possessed the inherent power to order a blood grouping test, saying, "if it (power to order

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25. Note 7, supra.
a blood test) is not an invasion of constitutional rights (and we think it very clearly is not), then it lies within the ambit of the inherent judicial power of the courts of record, and legislative permission or authority is superfluous. The Federal District Court of Appeals of the District of Columbia, in the case of Beach v. Beach, held that under 28 USCA, Rule 35 (a), which gives the court the discretionary power to order a physical or mental examination, it had the power to order a blood grouping test. California and Illinois have reached the same conclusion when confronted with the identical problem.

What weight is given to the results of the test varies in the given jurisdiction. In two precedent making decisions the New York Court of Appeals and the Supreme Court of Maine held that where a blood grouping test results in an exclusion, that finding is conclusive proof of non-paternity provided that the tests were correctly performed. In an earlier decision the Supreme Court of Maine had taken the opposite view, however, the court seems to have based its opinion on the ground that there was an error committed in the performance of the test. The court did not question the reliability of the test, on the contrary, it said, "we are not disposed to close our minds to conclusions which science tells us are established. Nor do we propose to lay down a rule of law that the triers of fact may reject what science says is true; for to do so would invite at some future time a conflict between scientific truth and stare decisis, and in that contest the result could never be in doubt." The court demonstrated that it meant what it said, for in the case of Jordan v. Mace, Maine held that a test resulting in an exclusion would be conclusive proof of non-paternity, and further that the only question left to the determination of the jury was that of whether or not the test was properly conducted. New York, in the case of Commissioner v. Constonie, reached the same result thus ending the long and difficult fight for the complete acceptance of the test begun in New York in 1934.

The other jurisdictions give various degrees of weight to results of the test, but the majority of them seem to recognize the test as

26. 114 Fed. 2d 479 (1940).
30. Note 28, supra.
31. Ibid.
being simply expert opinion which could be disregarded by the jury.\(^{32}\)

(Ohio) The Courts of Ohio have not as yet held an exclusion by the test as conclusive evidence of non-paternity, however, in an early case the Ohio Appellate Court sustained an order for a new trial made by the trial judge when the jury, disregarding the finding of the blood test, found the defendant to be the father of the child.\(^{33}\)

In contrast, the court reached an entirely opposite result in the later case of \textit{State ex rel Slovak v. Holod}.\(^{34}\) A still more recent case gave rise to a storm of protest, as the court reaffirmed its previous stand taken in the \textit{Holod} case.\(^{35}\) In rendering its opinion the court questioned the reliability of the test, citing certain objections from a medical standpoint. These objections had been previously answered in several articles written by experts on the subject.\(^{36}\)

(New Jersey) The Supreme Court of New Jersey, apparently disregarding earlier cases, has, at least by dicta, followed the lead of New York and Maine in holding that where a blood test results in an exclusion, that result is conclusive proof of non-paternity.\(^{37}\)

(Wisconsin) Although refusing to unequivocally state that a blood test exclusion result is conclusive proof, the Supreme Court of Wisconsin reversed on appeal the low courts finding in the case of \textit{Euclide v. State},\(^{38}\) taking the position that the verdict of guilty was in conflict with the evidence; that evidence being an exclusion of the defendant by the Landsteiner-Bernstein test.

(California) The courts of California admit blood tests as merely expert opinion, and have many times refused to disturb a jury’s verdict which was contrary to the result of the blood test. A well known case which exemplifies the attitude of California is that of \textit{Berry v. Chaplin}.\(^{39}\) Although three of the leading serologists of the country agreed that Chaplin was not the father of the plaintiff’s child, the jury found otherwise, and the verdict was affirmed on appeal. This case is a prime example of a basic fault in the jury system, namely, the very human trait of taking into the court room prejudice for or against one of the principals in a case. This prejudice is usually a result of gossip, heresy and sensation-aimed news-

\(^{32}\) 1 Wigmore Evidence § 165 A-B (3rd ed. 1940).
\(^{34}\) 63 Ohio App. 16, 24 N. E. 2d 962 (1939).
\(^{35}\) State ex rel Walker v. Clark, 144 Ohio St. 305, 58 N. E. 2d 773 (1944).
\(^{37}\) Anthony v. Anthony, 9 N. J. Super. 41, 74 A. 2d 919 (1950). See also Cortese v. Cortese, 76 A. 2d 717 (N. J. 1950), a very recent discussion on this point.
\(^{38}\) 231 Wis. 616, 286 N. W. 3 (1939).
paper articles. Such prejudice is present in all juries, and even more so in paternity actions. Commenting on the decision in the Chaplin case, the Boston Herald said "unless the verdict is upset, California has in effect decided that black is white; 2 and 2 = 5, and up is down".40

The courts of South Dakota, Maryland and Pennsylvania have accepted blood tests as mere expert opinion, refusing to hold an exclusion from the test as conclusive.41

Although this discussion has been limited more or less to the use of blood tests in bastardy proceedings, there are other related types of cases where the blood test has proven of value.

In rape cases the test has been successfully introduced a number of times.42 The court in the Florida case of Williams v. State,43 allowed the defendant to show that the blood found on his trousers did not belong to the same type as that of the prosecutrix. In a New York decision, where the prosecutrix claimed that she had a child as the result of the alleged rape, the court ordered that a test be given on the motion of the defendant.44

In divorce or annulment proceedings to establish adultery or fraudulent concealment of pregnancy, the New York courts have ordered the use of the test upon proper motion of the plaintiff.45 Under Section 306-A of the New York Civil Practice Act, the husband's motion for a blood test in a divorce suit was granted, and the court held that its result coupled with the plaintiff's oath of non-intercourse was sufficient to overcome the presumption of legitimacy.46

A blood test assented to by all the parties concerned was admitted in a case involving the legitimacy of the beneficiary of a trust fund,47 and in perhaps the first case of the use of the blood test in the courts of this country, the test was employed to settle a suit concerning an interchanged infant accident.48

As blood grouping tests are only of value and can only be admitted as evidence when properly given, great care must be taken in the performance of a test. All jurisdictions which have admitted the

40. April 19, 1945; See, 34 Cornell L. Q. 72 (1948).
43. 143 Fla. 826, 197 So. 562 (1940).
44. People v. Bresloff, Note 42, supra; State v. Damm, Note 7, supra.
45. V. Fant, v. V. V. Fant, 197 Misc. 970, 40 N. Y. S. 2d 579 (1943).
test require that it either be carried out by a doctor or pathologist qualified and appointed by the court. Upon admission of a result, the person who performed the test must be qualified as an expert.49 In an exhaustive work on the subject of paternity actions, Sidney B. Schatkin has set what in his opinion would constitute the proper safeguards in performing a test. (1) It must be carried out by a competent doctor or pathologist, (2) the identity of the alleged father, mother, and child must be verified, (3) all three tests must be carried out, (4) great care and accuracy must be used and all possible sources of error checked, (5) the sera used must be the proper and appropriate type and (6) the pathologist or doctor, especially in the case of an exclusion, should re-check the result and work.50

A blood grouping test is carried out not unlike a blood typing test, except that many more steps are required particularly in performing the highly complex MN test.51 Sera known to be of a particular type of blood is mixed with the sample to be tested, and the reactions of the combinations of the sera with the sample blood determines the type. In the AB test alone there are 27 possible combinations. Extensive safeguards must therefore be employed. Dr. Ernest Witebsky has pointed out that not all laboratories are equipped to carry out accurate examinations, however, the doctor further notes that "modern rapid transportation facilities can place a few well-equipped, more or less centrally located laboratories within reach of every court".52

The courts have used great caution in dealing with the test requiring that the standard procedural safeguards be taken before they are admissible.53 Maine, which accepts an exclusion as conclusive evidence, allows the jury only to determine whether or not the test was properly carried out.54 Time and time again when evidence was given that the test was not correctly performed the courts have not allowed the test to be introduced as evidence.55

**Objections**

The blood test is evidence of non-paternity, it cannot prove paternity in any case. This basic statement gives immediate rise to a logical objection. Since the defendant might not be able to exclude himself by the use of the test, would his case be materially damaged

50. Schatkin, Disputed Paternity Proceedings, p. 102, 103.
51. Note 12, supra.
52. Note 17, supra.
54. Note 28, supra.
55. Note 53, supra.
if this fact would be allowed as evidence? The answer is, of course, that it would. However, the courts have generally held that where no exclusion is shown, evidence of the test cannot be admitted. In those states where the tests are authorized by statute or in jurisdictions where the courts have claimed the inherent power to order the test, this rule of evidence seems to be the same. The reason for this holding is that such evidence is not revelent, for the test cannot possibly show paternity, and definite results from the test are obtainable in only about 45% of the cases assuming that the defendant is not guilty. In an early New York case the court held that the plaintiff in a suit for non-support of an illegitimate child did not have the reciprocal right as given to the defendant in such cases to require a blood test. The reason the court gave was that the best that a plaintiff could hope for by the exercise of such a right would be a non-exclusion, which would be inadmissible as irrelevent; and since the courts may order such tests only where they are revelent to a defense or prosecution of a particular case, the motion was properly overruled. Is such a rule unjust, as giving the defendant a method of proof not allowed the plaintiff? An anonymous writer in a national magazine adequately answered this argument when he said, "the jury still cherish a sentimental regard for the right of the unwed mother". The tearful young victim is given by her very sex a powerful weapon which the defendant could not, short of a biological miracle, ever hope to match.

The objection most often raised by critics of the blood test is that the taking of blood from a party to a suit constitutes an infringement of personal liberty.

One of the earliest rights of man sought to be protected was that right to be protected against self-incrimination. Today the constitution of almost every state as well as the federal constitution contains a provision protecting this right. There is a split of authority as to the extent of this protection. The majority of the jurisdictions of this country holds that a defendant cannot be made to testify against himself, but limits this protection to oral and written testimony and not physical acts or exhibition of a physical character.

57. Ibid. In the statute passed by North Carolina authorizing blood tests no provision was made in case of inconclusive tests, and no cases have been reported. See General Statutes (Michie) Supp. §§ 47 (1945).
58. Note 56, supra.
60. Note 1, supra.
In South Carolina the minority view prevails, that is, that a defendant in a criminal action may not be made to give any evidence whatsoever against himself.62 But even in those states which follow the more rigid minority view, the objection can not be raised where the blood test is taken in a criminal trial for bastardy. The defendant in such a case would not be testifying against himself as the only possible use of the test is to prove non-paternity and such evidence would certainly not be against the defendant. Further, since the mother and child are not parties to the action they could not object upon the grounds of self-incrimination.63

Another objection raised by opponents of the use of blood tests, is that the taking of blood from a person constitutes an invasion of his right of privacy. The right of privacy has been defined as the right to be left alone.64 The leading case upholding this objection is the New Jersey decision of Bednarik v. Bednarik.65 This decision aroused a storm of bitter protest, and has not been followed by the New Jersey courts.66 If the taking of blood is a breach of the right of privacy, why is not the taking of fingerprints, or the photographing of a suspect a breach of his privacy.

Truth is the prime objective of the Anglo-Saxon system of justice, and the over-zealous protection of an individual from the mere prick of a pin when another's reputation, and even financial security hangs in the balance is not in keeping with this objective.

Can the Blood Grouping Test be Admitted in South Carolina?

In South Carolina, as in most jurisdictions, the father of an illegitimate child faces not only a civil action on charges of non-support and maintenance of the child, but also a criminal prosecution for bastardy.67 There need not be any showing that the child will become a burden upon the state where charges are brought by the mother, however, such must be proven when the action is instigated by a third party. Furthermore, the mother who refuses to disclose the identity of the father becomes criminally liable.68 Moreover, the South

64. Thodes v. Graham, 238 Ky. 225, 37 S. W. 2d 46 (1931); See, 2 S. C. L. Q. 90 (1950).
65. 18 N. J. Mis. 633, 16 A. 2d 80 (1940).
66. Note 37, supra.
Carolina court has held that a conviction of bastardy may be had on the uncorroborated testimony of the mother. 69

There is a paucity of reported paternity cases in South Carolina, and whether or not the courts of this state would admit a blood grouping test is a matter of speculation. However, the question of whether or not the court would order a blood test to be taken would have to be answered in the negative. The Supreme Court of this state has held that it does not have the power to order a party in a civil action to submit to a physical examination. 70 In view of these cases it would seem that a statute vesting the court with such authority in appropriate cases would be a condition precedent to the use of the test in South Carolina.

CONCLUSION

Whether the action be a criminal charge of bastardy or a civil suit for non-support, the accused is at a distinct disadvantage, for the woman is placed on a pedestal by southern culture and her testimony deemed for all practical purposes irrebuttable. It is not difficult to predict a jury’s verdict in such cases where the only testimony is that of the unwed mother and of the defendant, especially in South Carolina where the uncorroborated testimony of the prosecutrix is deemed sufficient evidence upon which to base a conviction. In a great many such cases injustice will prevail, an injustice that could have been avoided by the use of blood grouping tests. Judge Wylegala of the Erie County Childrens Court of New York has stated that out of 457 tests there were 61 exclusions as shown by the test. Schatkin in his book Disputed Paternity Proceedings 71 reported even more startling figures. He disclosed that of all the accused men in paternity proceedings who demand the test in the city of New York, 30% were shown to be innocent by the results of the test. 72 How many of these falsely accused men have been unjustly punished is a matter of conjecture. However, it would not be false to assume that innocent men have been convicted who would have established their innocence had the courts recognized the infallibility of blood grouping tests which result in an exclusion.

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70. State v. Meares, 60 S. C. 527, 39 S. E. 245 (1900).