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## THE EVIDENTIARY USE OF THE HLA BLOOD TEST IN VIRGINIA

Linda L. Lemmon\* Lynn K. Murphy\*\*

#### I. INTRODUCTION

In 1966 Virginia enacted legislation, now section 20-61.2 of the Code of Virginia,<sup>1</sup> providing for the admission into evidence of the results of blood tests in cases involving questions of paternity.<sup>2</sup> In 1982, a second statute, section 20-61.1 of the Code of Virginia,<sup>3</sup> was amended to permit the use of genetic blood grouping tests, including the human leukocyte antigen (HLA) test, as evidence of paternity in child support proceedings.<sup>4</sup> With the enactment of these two statutes, Virginia has joined a growing number of states which recognize the accuracy and reliability of the HLA test in establishing paternity.

This article focuses on the use of the HLA blood test in actions brought under sections 20-61.1 and 20-61.2. The issues discussed will include: (1) the intended scope of the statutes and their potential application to civil and criminal actions, both for support and otherwise; (2) the application of the HLA test within the intended scope of the statutes; (3) the admissibility of the HLA test to prove as well as disprove paternity; and (4) the weight to be assigned to the HLA test as evidence.

4. Id.

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<sup>1.</sup> VA. CODE ANN. § 20-61.2 (Repl. Vol. 1983).

<sup>2.</sup> Id.

<sup>3.</sup> Id. § 20-61.1.

#### II. THE HISTORICAL DEVELOPMENT OF VARIOUS BLOOD TESTS AND THEIR USE IN LEGAL PROCEEDINGS

In 1901, at the University of Vienna, Dr. Karl Landsteiner first identified the ABO blood group system in red blood cells. Landsteiner observed that red cells from the blood of one person did not always mix with serum from the blood of others. Rather, on occasion an agglutination, or clumping, occurred. Landsteiner concluded that an individual's blood serum contains naturally occurring antibodies that reject ABO blood group antigens not present in that person.<sup>5</sup> This discovery quickly became helpful in decreasing the risks associated with blood transfusions.

During the next several decades, Landsteiner and his associates identified additional blood factors, including the MNS and Rh groups.<sup>6</sup> As the Landsteiner series of tests developed, courts became more cognizant of the usefulness of blood tests for purposes of excluding paternity.<sup>7</sup> Despite the receptivity exhibited by some

The ABO, MNS, and Rh blood test procedures, used together, yield a 50 to 60 percent chance of excluding a mistakenly accused defendant in a paternity action. *Id.* at 731. All three of these principal blood groups can be tested by variant forms of agglutination tests, and, when conducted under proper conditions and analyzed by experts, the ABO, MNS, and Rh blood test procedures insure almost 100 percent accuracy. Larson, *supra* note 5, at 730-31.

7. See, e.g., Livermore v. Livermore, 233 Iowa 1155, 11 N.W.2d 389 (1943) (instruction relating to testimony about blood tests was proper); Jordan v. Mace, 144 Me. 351, 69 A.2d 670 (1949) (exclusion of paternity by blood grouping tests under biological law is scientific proof that respondent is not father of child); State ex rel. Walker v. Clark, 144 Ohio St. 305, 58 N.E.2d 773 (1944) (the findings and results of a standard and recognized blood grouping test admitted in evidence are not conclusive of nonpaternity, but may be considered for whatever weight they may have in proving that fact).

<sup>5.</sup> An antigen is any substance which, when introduced into a person who himself lacks the substance, stimulates the production of an antibody. There are antigens located on the surfaces of all body cells. For a more extensive discussion of the antigen-antibody theory, see Larson, Blood Test Exclusion Procedures in Paternity Litigation: The Uniform Acts and Beyond, 13 J. FAM. L. 713, 717-18 (1973).

<sup>6.</sup> In 1927, Landsteiner discovered another red blood cell type, which he designated the MN system. This new blood group system was totally independent of the ABO system. The MN system was found to have little value in diminishing the risks that accompany blood transfusions, because the body rarely produces antibodies to these antigens. Since antisera can be produced to detect these factors, however, the MN system does have some value in court as a paternity test. The MN antigen test was found to be a reliable genetic marker because it occurs in the blood of a high percentage of the population. M is present in approximately 30 percent of the Caucasian population. N is present in 20 percent. MN is present in the remaining half. This test alone can establish nonpaternity with approximately 32 percent accuracy. Id. at 724. In 1940 the Rh blood factor was discovered by testing human blood with the antiserum produced in a rabbit after injecting it with the blood of a Rhesus monkey. Id. at 726.

courts, and the accuracy of these blood tests, blood test results were not readily accepted by all courts. Instead, early cases reflected a judicial hesitancy to give these test results much evidentiary weight in paternity litigation. For example, on several occasions in the 1940s, defendants were adjudicated to have fathered children despite blood tests which conclusively demonstrated nonpaternity.<sup>8</sup>

In 1952, the American Medical Association laid to rest many concerns regarding the accuracy and reliability of blood tests by recommending without reservation that the Landsteiner series of tests be adopted for medical-legal purposes.<sup>9</sup> Since this endorsement, there has been a trend by courts and legislatures to accept the reliability of these tests.<sup>10</sup> Furthermore, the conclusiveness of blood test results has become more accepted with the discovery of additional blood grouping systems.<sup>11</sup>

In 1953, the human complex leukocyte antigen (HLA) system was first identified. The HLA test entails an analysis of the anti-

9. Davidsohn, Levine & Wiener, Medicolegal Application of Blood Grouping Tests, 149 J. A.M.A. 699 (1952).

10. Most states now have statutes authorizing the admission of blood test results in actions to prove (or disprove) paternity. See, e.g., ALA. CODE § 26-12-5 (1977); D.C. CODE ANN. § 16-2343 (Supp. 1978); HAWAII REV. STAT. § 584-12 (1976); MD. FAM. LAW CODE ANN. § 5-1029 (1984); MICH. COMP. LAWS § 722.716 (Cum. Supp. 1984-85); MINN. STAT. § 257.63 (1982); N.D. CENT. CODE § 14-17-13 (Supp. 1977); UTAH CODE ANN. § 78-25-22 (1977); WIS. STAT. ANN. § 767.48 (West Supp. 1981). A few state courts have used judicial notice to admit evidence of statistical probabilities in paternity suits. See, e.g., Broadwater v. Broadwater, 247 Md. 607, 233 A.2d 782 (1967); Malvasi v. Malvasi, 167 N.J. Super. 513, 401 A.2d 279 (Ch. Div. 1979).

11. Although there are more than 60 blood group systems currently available for testing purposes, seven serologic systems are recommended for routine investigations. In addition to the ABO, MN, and Rh systems, the Kell, Duffy, and Kidd systems are commonly utilized. The advantages to these particular tests are that the antisera for each system are available and reliable. Each system provides a reasonably high probability of exclusion in relation to cost, the cumulative probability of exclusion is 63-72 percent, and the addition of only one other system (HLA) increases the probability of exclusion to over 90 percent, as compared with a probability of exclusion of about 98 percent for 62 systems. AMA & Family Law Sections, ABA, Joint AMA-ABA Guidelines: Present Status of Serologic Testing in Problems of Disputed Parentage, 10 FAM. L.Q. 247 (1976) [hereinafter cited as AMA-ABA Guidelines]. For more information about the Kidd, Kell, and Duffy blood group systems, see id.

<sup>8.</sup> See, e.g., Berry v. Chaplin, 74 Cal. App. 2d 652, 169 P.2d 442 (1946) (jury found actor Charlie Chaplin to be father even though blood tests excluded him); Commonwealth v. Krutsick, 151 Pa. Super. 164, 30 A.2d 325 (1943) (holding that blood tests should not be admitted into evidence while the probability of their being of probative effect is so variable); State v. Damm, 62 S.D. 123, 252 N.W. 7 (1933) (holding that blood group tests were not so generally accepted as a scientific fact within the medical community as to make their exclusion reversible error).

gens found in an individual's white blood cells.<sup>12</sup> Antigens, genetically transmitted structures which trigger the production of antibodies, are contributed by a child's mother, father, or both.<sup>13</sup> Thus, the putative father may be excluded as the child's father by two means:

(1) if a child possesses an antigen not present in the known mother or the putative father, the putative father cannot be the child's natural father, and (2) if the child does not possess antigens that must be contributed by the putative father because of certain haplotypes, or antigen combinations, that he possesses, the putative father cannot be the child's natural father. Conversely, if both the child and the putative father display certain antigens not found in the mother, the putative father cannot be excluded from the class of possible fathers.<sup>14</sup>

Because HLA antigens function almost as a genetic "fingerprint,"<sup>15</sup>

13. For every inherited characteristic, a person has one gene or haplotype from the father and one gene from the mother. The maternal gene is located opposite the paternal gene for the same characteristic on a designated pair of chromosomes. These two points are collectively referred to as the locus. In the HLA system, two or more of these loci have been identified as being closely linked. The two inherited haplotypes which share a location on a white blood cell are a genotype. *Id.* Thus, four HLA antigens, two from the maternal haplotype and two from the paternal haplotype, make up the child's genotype. For a clear and simplified explanation of the genetics of HLA testing, see Johnson, *Proof of Paternity—The New Test*, 26 VA. BAR NEWS 18, 19 (June 1978). For a more detailed explanation, see Terasaki, *Resolution by HLA Testing of 1,000 Paternity Cases Not Excluded by ABO Testing*, 16 J. FAM. L. 543 (1977-78).

14. Jones v. Robinson, No. 820855, slip op. at 4 (Va. Sup. Ct. April 26, 1985). The ability to identify blood specificities is of value in paternity litigation for two reasons. First, blood specificities are immune from environmental influences, *i.e.*, they are normally not affected by age, diet, climate, radiation, or other common influences. Second, blood specificities follow inheritable patterns. Larson, *supra* note 5, at 718.

15. When a child's HLA antigens are compared to those of his mother, it becomes immediately apparent which two antigens came from the mother and which two must therefore have come from the father. A man is excluded if he and the mother both lack an antigen which the child has. Conversely, because the HLA antigens may be found together in various arrangements, making possible tens of thousands of HLA combinations, the possibility that a child and a putative father share a common haplotype, but are unrelated, is very unlikely. See A. SVEJGAARD, M. HAUGE, C. JERSILD, P. PLATZ, L. RYDER, L. STAUB NIELSEN & M. THOMSEN, THE HLA SYSTEM: AN INTRODUCTORY SURVEY 67 (L. Beckman & M. Hauge ed. 1975) [hereinafter cited as A. SVEJGAARD]; see also Blumberg, Human Leukocyte Antigen Testing: Technology Versus Policy in Cases of Disputed Parentage, 36 VAND. L. REV. 1587, 1591 n.25 (1983); Ellman & Kaye, Probabilities and Proof: Can HLA and Blood Group Testing Prove Paternity?, 54 N.Y.U. L. REV. 1131 (1979).

<sup>12.</sup> Reisner & Bolk, A Layman's Guide to the Use of Blood Group Analysis in Paternity Testing, 20 J. FAM. L. 657, 666 (1981-82). There are at least fifty antigens in the HLA system. Id.

#### the HLA test is valuable for both medical<sup>16</sup> and legal purposes.

Most of the red cell blood group systems used to determine paternity, such as those in the Landsteiner series, are relatively simple, with each system being made up of rather few antigens. Because of the large number of antigens in the HLA system, the HLA test is more precise and discriminating in establishing the probability of paternity. The most accurate indicator of paternity however, lies in combining several blood testing systems. For example, the Landsteiner series of tests alone vields a fifty to sixty percent chance of excluding a potential father.<sup>17</sup> However, when used in conjunction with the HLA test an exclusion rate of approximately ninety-five percent can be achieved.<sup>18</sup> A positive statistical probability of paternity approaching 100 percent is possible only when the results of the HLA test, the Landsteiner series, and other blood antigen tests are combined.<sup>19</sup> This reliability has prompted many states, including Virginia, to recognize the validity of blood tests by enacting statutes permitting their use as evidence in cases where the question of paternity arises.<sup>20</sup>

## III. THE EVOLUTION AND SCOPE OF BLOOD TESTING STATUTES IN VIRGINIA

In 1966, with the enactment of a bill permitting the admission of blood test results in cases where paternity was at issue, Virginia joined a growing number of states which recognize the value of blood testing. That first bill, now section 20-61.2, has since been joined by another Virginia statute, section 20-61.1, which permits blood tests, including the HLA test, to be used as evidence of paternity in child support proceedings.

Although these statutes have expanded the potential use of the

<sup>16.</sup> Human leukocyte antigens play a crucial role in the success of organ transplants. If HLA antigens not present in an individual's system are introduced into his blood, he may become sensitized and produce antibodies to this foreign antigen. Larson, *supra* note 5, at 745. The HLA antigens also function to determine susceptibility to certain diseases and the immune response, and to match donors and recipients for transfusion of some blood components. See, e.g., A. SVEJGAARD, supra note 15, at 20-21, 40-50; Motulsky, The HLA Complex and Disease, 300 NEW ENG. J. MED. 918 (1979); Rosenberg & Kidd, HLA and Disease Susceptibility: A Primer, 297 NEW ENG. J. MED. 1060 (1977).

<sup>17.</sup> K. BOORMAN & B. DODD, AN INTRODUCTION TO BLOOD GROUP SEROLOGY 321 (1970).

<sup>18.</sup> Sussman & Gilja, Blood Grouping Tests For Paternity and Nonpaternity, 1981 N.Y. ST. J. MED. 343, 345.

<sup>19.</sup> Id.

<sup>20.</sup> See infra text accompanying notes 25-53.

HLA test in child support actions,<sup>21</sup> it is not clear what impact these statutory provisions may have on other civil and criminal actions in which there is a question of paternity. Careful reading of these statutes raises the possibility of their application in cases involving rape,<sup>22</sup> adultery,<sup>23</sup> or inheritance.<sup>24</sup>

#### A. Section 20-61.1

Section 20-61.1 of the Virginia Code, as first enacted in 1952, granted a court power to enter and enforce orders requiring the putative father to support his child born out of wedlock.<sup>25</sup> Various

25. VA. CODE ANN. § 20-61.1 (Repl. Vol. 1984). The full text of the statute now provides: Support of children of unwed parents by father; evidence of paternity. — Whenever in proceedings hereafter under this chapter concerning a child whose parents are not married, a man admits before any court having jurisdiction to try and dispose of the same, that he is the father of the child or the court finds that the man has voluntarily admitted paternity in writing, under oath, or if it be shown by other evidence beyond reasonable doubt that he is the father of the child and that he should be responsible for the support of the child, the court may then enter and enforce judgment for the support, maintenance and education of such child as if the child were born in lawful wedlock.

Such other evidence that the man is the father of the child shall be limited to evidence of the following:

(1) That he cohabited openly with the mother during all of the ten months immediately prior to the time the child was born; or

(2) That he gave consent to a physician or other person, not including the mother, charged with the responsibility of securing information for the preparation of a birth record that his name be used as the father of the child upon the birth records of the child; or

(3) That he allowed by a general course of conduct the common use of his surname by the child; or

(4) That he claimed the child as his child on any statement, tax return or other document filed and signed by him with any local, state or federal government or any agency thereof; or

(5) Results of medically reliable genetic blood grouping tests, which tests may include the human leukocyte antigen (HLA) test; or

(6) That he and the mother applied for a marriage license after conception of the child.

The findings of a court hereunder shall not be used against the man in any manner except for the specific purposes of this chapter and for the purposes of descent and distribution pursuant to Title 64.1.

Notwithstanding the provisions of § 19.2-271 or any other law, the judge or other court officer before whom a man has admitted paternity of any child, whose support is the subject of any proceeding brought under the provisions of this chapter, may testify, in any court having jurisdiction to conduct proceedings under this chapter, as to any admission of paternity made by such man in his court and as to any other

<sup>21.</sup> For full text of the statutes, see infra notes 25 & 63.

<sup>22.</sup> See infra notes 46-48 and accompanying text.

<sup>23.</sup> Id.

<sup>24.</sup> Id.

amendments have expanded the section to provide that such an order may be entered and enforced when the defendant (putative father) has admitted paternity or when other evidence of paternity is presented.<sup>26</sup>

In 1982, section 20-61.1 was amended to allow the admission of blood grouping tests, including the HLA test, as evidence of paternity in an action for support of an illegitimate child. This statute also sets forth other types of evidence that may be used to prove paternity.<sup>27</sup> Questions have arisen, however, as to whether the statute is intended to apply to civil as well as criminal support proceedings.

The placement of section 20-61.1, in Chapter 5 of Title 20, suggests that the statute applies only in criminal actions.<sup>28</sup> In the 1959 case of Distefano v. Commonwealth,<sup>29</sup> the Virginia Supreme Court stated that section 20-60 of the Code of Virginia provides a penalty which may be imposed for a *conviction* under section 20-61.1.<sup>30</sup> The court held that a conviction under section 20-61.1 was permitted only when the statutory standard for proof of paternity was met.<sup>31</sup> By using the term "conviction," the court appeared to declare section 20-61.1 a criminal statute. A later opinion by the Attorney General of Virginia, however, indicates that "an action under § 20-61.1 of the Code is not criminal or penal in that it does not provide for a penalty or a punishment . . . . "<sup>32</sup> According to the Attorney General, the father is not subject to incarceration or other punishment under section 20-61.1 until he has violated the court's order by failing to provide for the child's support.<sup>33</sup> This opinion suggests that section 20-61.1 simply authorizes a court to enter judgment for child support.

The Virginia Supreme Court recently resolved this conflict over

- 29. 201 Va. 23, 109 S.E.2d 497 (1959).
- 30. Id. at 27, 109 S.E.2d at 500.
- 31. Id. at 28-29, 109 S.E.2d at 501.
- 32. 1972-73 Op. Va. Att'y Gen. 52.

facts directly affecting the relevancy or probative value of such admission.

Id.

<sup>26.</sup> See id.

<sup>27.</sup> Id.

<sup>28.</sup> Title 20 encompasses domestic relations issues, and Chapter 5 specifically addresses actions for desertion and non-support. Section 20-61 defines the crime of desertion and non-support, classifies it as a misdemeanor, and recites the punishments which may be imposed upon conviction.

<sup>33.</sup> Id.

the nature of section 20-61.1 in Jones v. Robinson.<sup>34</sup> In Jones, the mother (the appellee) filed a nonsupport petition in the Richmond Juvenile and Domestic Relations District Court against the putative father (the appellant) of her illegitimate child. The appellee contended that, because none of the evidentiary criteria set out in section 20-61.1 applied to her situation, her action was civil in nature.<sup>35</sup> The trial court ruled that section 20-61.1 applies only to criminal proceedings for support.<sup>36</sup> It was from that decision that Jones appealed.<sup>37</sup>

On appeal, the appellant in *Jones* argued that, by enacting section 20-61.1, the Virginia legislature recognized both the illegitimate child's right to support and the alleged father's interest in being protected from fraudulent claims of paternity.<sup>38</sup> There are two reasons for finding this assertion valid. First, the limitations on the types of evidence admissible to prove paternity and the imposition of a burden of proof beyond a reasonable doubt serve to protect the interests of the father. Second, the power granted to the courts by the statute to "enter and enforce judgment for the support, maintenance and education of [the] child as if the child were born in lawful wedlock"<sup>39</sup> protects the interests of illegitimate children. Thus, the provisions of section 20-61.1 serve the best interests of all parties to a support proceeding, whether civil or criminal.

The Virginia Supreme Court agreed with the appellant and concluded that section 20-61.1 applies to both civil and criminal proceedings. The court held that it would be:

unrealistic to suggest that the General Assembly intended to permit evidence to prove paternity in a civil case different from that required in a criminal case. Under such a theory, paternity established under the less stringent proof requirements of a civil support action would be an insufficient basis for criminal nonsupport proceedings.<sup>40</sup>

<sup>34.</sup> No. 820855 (Va. Sup. Ct. April 26, 1985).

<sup>35.</sup> Blood tests were ordered by the court, but at that time § 20-61.1 had not yet been amended to provide for the admission of blood test results as evidence of paternity. Appellee then wanted to have the proceeding declared civil, thus relieving her from the burden of presenting the evidence admissible under § 20-61.1.

<sup>36.</sup> Brief for Appellant at 4, Jones v. Robinson, No. 820855 (Va. Sup. Ct. filed May 19, 1983).

<sup>37.</sup> Id. at 2.

<sup>38.</sup> Id. at 7.

<sup>39.</sup> VA. CODE ANN. § 20-61.1 (Repl. Vol. 1984).

<sup>40.</sup> Jones, No. 820855, slip. op. at 11. Although the court found that the evidentiary crite-

Thus, section 20-6l.1 provides the sole civil as well as criminal remedy for nonsupport of illegitimate children.

Section 20-61.1 provides that "[t]he findings of a court hereunder shall not be used against the man in any manner except for the specific purposes of this chapter and for the purposes of descent and distribution pursuant to Title 64.1."<sup>41</sup> This language limits the scope of section 20-61.1. As a result of the *Jones* decision, the HLA test clearly is admissible as evidence of paternity in criminal and civil cases for desertion and nonsupport. Less clear, however, is the role of blood tests in descent and distribution matters under Title 64.1.

Section 64.1-5.1 provides that for purposes of intestate succession "paternity is established by clear and convincing evidence as set forth in section 64.1-5.2."<sup>42</sup> Section 64.1-5.2, in turn, states that "[f]or the purposes of Title 64.1, evidence that a man is the father of a child born out of wedlock . . . shall be limited to [the stated criteria],"<sup>43</sup> none of which permit the use of blood test results as evidence. Because section 20-61.1 permits findings regarding paternity to be used for purposes of determining descent and distribution, it appears that proceedings initiated and concluded pursuant to section 20-61.1 are admissible. That is, once a man is adjudged liable for the support of an illegitimate child under the standards of proof and the procedures in section 20-61.1, that judgment should be sufficient evidence of paternity for purposes of section 64.1-5.2.<sup>44</sup>

#### B. Section 20-61.2

While the provisions of section 20-61.1 appear to be expressly or impliedly limited in application to Chapter 5 of Title 20, the scope of Virginia's other blood test statute, section 20-61.2, is less obvious. As proposed in 1966, the original bill provided that blood tests

ria set forth in § 20-61.1 apply to both civil and criminal proceedings, it nevertheless upheld the lower court's decision admitting the blood tests into evidence. The basis of the court's decision was that § 20-61.1 was unconstitutional at the time the suit was brought (prior to the 1982 amendment), and therefore its limitations on admissible evidence in paternity actions were of no effect. Thus, the HLA blood test results were admissible as probative evidence.

<sup>41.</sup> VA. CODE ANN. § 20-61.1 (Repl. Vol. 1983).

<sup>42.</sup> VA. CODE ANN. § 64.1-5.1(2)(b) (Repl. Vol. 1980).

<sup>43.</sup> Id. § 64.1-5.2.

<sup>44.</sup> Id.; see also id. § 64.1-5.1(3)(iii).

could be ordered, and the results admitted, in either criminal or civil proceedings "in any court in which the question of paternity arises."<sup>45</sup> Such all-encompassing language suggests that the intent of proponents of the bill was to authorize the admission of blood test results in any case in which they might be useful.<sup>46</sup> Accord-

Constitutional questions may arise in certain settings, however, with regard to court ordered blood tests for use as evidence. In Beckwith v. Beckwith, 355 A.2d 537 (D.C. 1976), cert. denied, 436 U.S. 907 (1978), a husband initiated an action for absolute divorce on adultery grounds, alleging that a child was born to his wife as a result of her adulterous conduct. When the lower court ordered, sua sponte, that the wife submit herself and her child to blood grouping tests, the wife appealed, contending that ordering blood tests in order to prove adultery was a violation of the child's constitutional right to privacy under the fourth amendment's guarantee of the right to be free of unreasonable searches and seizures. The court, in deciding the appeal against the wife, cited Schmerber v. California, 384 U.S. 757 (1966), a leading blood test case which had earlier confronted the right to privacy argument. The Supreme Court in Schmerber formulated several questions which must be answered affirmatively in order for a blood test to withstand constitutional challenge, including whether the intrusion was reasonable under the circumstances. Id. at 768. The court in Beckwith determined that ordering a blood test of the child would meet the Schmerber criteria. The court held that the nature of the intrusion was reasonable under the circumstances, both due to the great probative value of blood tests in determining paternity and to the negligible extent of the intrusion. Beckwith, 355 A.2d at 545. See also Cortese v. Cortese, 10 N.J. Super. 152, 76 A.2d 717 (App. Div. 1950) (statute authorizing the trial court in a civil action to issue and enforce a compulsory order to take a blood grouping test is constitutional); Anthony v. Anthony, 9 N.J. Super. 411, 74 A.2d 919 (Ch. Div. 1950) (ordering of a compulsory blood grouping test on the husband's application in a divorce suit, where the husband denied paternity of the child, would not infringe on the right of privacy of the parties); State ex rel. Evertson v. Cornett, 391 P.2d 277 (Okla. 1964) (in a divorce action, requiring a child to submit to a blood test to determine paternity would not be a violation of the child's constitutional rights to privacy, due process, or against selfincrimination).

There have also been fourteenth amendment challenges to court-ordered blood tests in paternity proceedings. A challenge by a putative father to a statute permitting court-ordered blood tests on due process and equal protection grounds was rejected by the court in Perry v. Commonwealth, 652 S.W.2d 655 (Ky. 1983). The court noted that the statute provided adequately for equal rights of the mother, child, and alleged father in obtaining blood test evidence.

Fifth amendment challenges have been made to the use of blood tests in a criminal setting. Cf. Linda K. L. v. Robert S., 109 Misc. 2d 628, 630, 440 N.Y.S.2d 825, 827 (Fam. Ct. 1981) (blood tissue test did not implicate fifth amendment privilege, since that privilege is limited to criminal cases, and therefore, not applicable in this paternity case). But see State v. Damm, 62 S.D. 123, 252 N.W. 7 (1933). The appellant was tried for the rape of his foster daughter. A child born after this incident was alleged to be his. Appellant called an expert to show the impossibility of the claimed paternity. The court held that the lower court's

<sup>45.</sup> H.B. 862 (offered Feb. 21, 1966).

<sup>46.</sup> Such a broad interpretation of section 20-61.2 perhaps would have eliminated the need for laying a foundation according to Frye standards for admitting scientific evidence, unless an opposing party challenges the reliability of the test itself. See Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923) (*Frye* allows a court to admit scientific evidence only if the evidence has "gained general acceptance in the particular field in which it belongs").

ingly, blood test results seemingly would have been admissible under the originally proposed version of section 20-61.2 in rape and adultery trials, and possibly in wrongful death, workers' compensation, and inheritance cases.<sup>47</sup> However, when the bill was enacted as part of Title 8 of the Code, its language had been changed to provide that in "the trial of any *divorce or support proceedings* in any court in which the question of paternity arises, blood tests may be ordered" and the results admitted.<sup>48</sup> Restricting the scope of the bill was perhaps a cautionary measure. Although blood test results were becoming accepted as evidence in paternity actions in 1966, no state's legislature had at that time enacted a blanket provision admitting such evidence in all criminal and civil actions. Thus, little precedent was available to the Virginia legislature as a guideline for the potential effects of such a broad statute.

In 1977, with the repeal of Title 8, the statute permitting the admission of blood test results in any divorce or support proceeding was re-enacted in Title 20, Chapter 5 of the Code of Virginia.<sup>49</sup> Its re-enactment into Title 20, the domestic relations title of the code, appeared to restrict its application to domestic relations cases.

In 1982, section 20-61.2 was amended to read: "In the trial of *any matter* in *any court* in which the question of paternity arises, regardless of any presumptions with respect to paternity," blood tests may be ordered and the results admitted in evidence.<sup>50</sup> As a

47. Use of blood tests for evidentiary purposes as a result of such a general statute in any of these types of cases would, of course, be dependent upon specific statutory restrictions. See infra note 53; see also supra text accompanying notes 41-44.

48. VA. CODE ANN. § 8-329.1 (Cum. Supp. 1975). The bill as enacted read:

In the trial of any divorce or support proceedings in any court in which the question of paternity arises, regardless of any presumptions with respect to paternity, the court before whom the matter may be brought, upon motion of either party, may direct and order that the alleged father, the mother and the child shall submit to a blood grouping test; provided, that the court, in its discretion, may require the person requesting the blood grouping test to pay the cost thereof. The results of such blood grouping tests shall be admitted in evidence when offered by a duly licensed practicing physician or other qualified person.

50. VA. CODE ANN. § 20-61.2 (Repl. Vol. 1983) (emphasis added). For the full text of the

refusal to order a blood test to determine the paternity of the child was not an abuse of discretion. Id. at 136, 252 N.W. at 12. The court noted, however, that there would have been an abuse of discretion if a court refused to take cognizance of an accepted scientific fact, for example, that the fingerprints of no two individuals are in all respects identical. Id. The authors suggest that the HLA blood test is accurate and specific enough in demonstrating the probability of paternity that a court would err if it failed to recognize its value as scientific evidence in a criminal setting.

<sup>49. 1977</sup> Va. Acts ch. 627, at 1227.

result of this broad language, it may now be possible to have a blood test ordered and the results admitted as evidence in any action where paternity is relevant, such as a criminal action against a woman for adultery.<sup>51</sup> Indeed, there appears to be no other reason for the amendment of section 20-61.2, if not to broaden its scope. It can be argued, however, that such a broad reading of the statute is unwarranted simply by virtue of its placement in Chapter 5 of Title 20. The jurisdictional provisions of Title 20 provide that "[p]roceedings under this chapter shall be had in the juvenile and domestic relations district courts, which shall have exclusive origi-Many cases in which paternity may be an issue are not "[p]roceedings under this chapter." Therefore, the question remains whether, by amending the statute in 1982, the legislature intended its scope to exceed the limits of Title 20, thus permitting its application to all civil and criminal actions.<sup>53</sup>

current statute, see infra note 63.

53. Despite the broad language of § 20-61.2 which allows evidence of blood tests in "any matter" in which paternity is at issue, other, more specific, statutes may not permit the court's consideration of such evidence. For example, § 64.1-5.2, which limits the evidence admissible to establish the paternity of an illegitimate child for purposes of intestate succession, does not include evidence of blood test results. *Id.* § 64.1-5.2 (Repl. Vol. 1980). Because specific statutes generally prevail over general statutes on the same subject. it is likely that blood test evidence is not admissible in proceedings to establish paternity for intestate succession. However, a judgment establishing paternity under § 20-61.1 is admissible for intestate succession purposes. *See supra* notes 41-44 and accompanying text.

In other areas, no specific statutory language limits the types of evidence admissible to establish paternity. With respect to the distribution of damages awarded in wrongful death actions, the "children" of the decedent fall within the first class of beneficiaries entitled to at least a portion of the award. Id. § 8.01-53 (Repl. Vol. 1984). Neither a definition of the term "children" nor the types of evidence admissible to prove that a particular child is the child of the decedent appears in the statute. The Virginia Supreme Court has, however, ruled that the statute makes an illegitimate child a beneficiary of the deceased. Carroll v. Sneed, 211 Va. 640, 644, 179 S.E.2d 620, 623 (1971). Thus, when the question whether the decedent was the father of a particular illegitimate or legitimate child arises in a wrongful death suit, § 20-61.2 allows the court to consider blood test results as evidence of paternity. See supra note 51.

For purposes of workers' compensation benefits, when an employer must pay benefits to the dependents of its deceased employee, certain persons are presumed to be wholly dependent. See VA. CODE ANN. § 65.1-66 (Repl. Vol. 1980). Among these persons is a child of the employee under certain circumstances. Id. Section 65.1-66 defines "child" to include "an acknowledged illegitimate child." Id. It does not specify what techniques are proper to determine whether a child is an "acknowledged illegitimate." The Virginia Supreme Court has held, however, that the Workmen's Compensation Act does not prescribe a particular test

<sup>51.</sup> See, e.g., Beckwith v. Beckwith, 355 A.2d 537 (D.C. 1976), cert. denied, 436 U.S. 907 (1978) (ordering the mother to submit her child to blood grouping tests to determine the issue of adultery).

<sup>52.</sup> VA. CODE ANN. § 20-67 (Repl. Vol. 1983) (emphasis added).

#### IV. IS HLA A BLOOD TEST?

#### A. Comparing the Provisions of Sections 20-61.1 and 20-61.2

The impact of the expansive language in section 20-61.2 with respect to the use of blood test results as evidence in any courtroom may be significant. Its impact on the specific use of HLA test results in cases under that statute is less clear. A question exists concerning whether the Virginia legislature intended that the HLA test be included as a "blood grouping test" within the meaning of section 20-61.2.54 While section 20-61.1, as amended in 1982, permits the use of the "[r]esults of medically reliable genetic blood grouping tests, which tests may include the human leukocyte antigen (HLA) test"55 as evidence of paternity, section 20-61.2 has never been similarly amended to include the HLA test. Perhaps the legislature intended the two statutes to be read together because of their proximity in the Code and the similarity of their subject matter. Additionally, this adhesion was evidenced by the joint amendment of the two sections by the General Assembly in 1982.56 The definition of a blood test is unlikely to vary between the closely linked statutes. The reference to HLA in section 20-61.1 certainly seems to indicate the legislature's understanding that HLA can function as a blood grouping test and legislative acceptance of HLA in that role.

Nevertheless, the lack of any specific reference to the HLA test in section 20-61.2 may be significant. In *Lorraine v. Linwood*,<sup>57</sup> a New York court encountered a similar situation when the petitioner attempted to introduce serum tests into evidence under a paternity blood test statute.<sup>58</sup> The court in *Lorraine* stated that it

for determining paternity, and has expressly held that the evidentiary requirements of § 20-61.1 do not apply in the workers' compensation area. See Allstate Messenger Serv. v. James, 220 Va. 910, 911-12, 266 S.E.2d 86, 87 (1980). Hence, one can argue that, by authority of § 20-61.2, blood test results may be considered as evidence that a deceased employee is the father of a particular illegitimate child. Section 20-61.2, by its own terms, however, allows the admissibility of blood test results only in proceedings before a court. It does not apply to proceedings before the Industrial Commission or other administrative agencies.

<sup>54.</sup> See infra text accompanying notes 64-77 (discussing whether the HLA test is a blood test).

<sup>55.</sup> VA. CODE ANN. § 20-61.1 (Repl. Vol. 1983) (emphasis added).

<sup>56. 1982</sup> Va. Acts ch. 307, at 513-14.

<sup>57. 115</sup> Misc. 2d 922, 455 N.Y.S.2d 48 (Fam. Ct. 1982).

<sup>58.</sup> The petitioner attempted to introduce into evidence a written report embodying the results of a comprehensive blood test, including the RBC enzyme and RBC serum protein tests. The court held that it could not properly admit these test results because the legislature, while removing the bar to the receipt into evidence of HLA test results, had remained

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[0]f no moment to argue that [the tests] are generally accepted as reliable in the scientific community. That remains a matter for legislative determination, one which may be slow to come. It is not uncommon for a hiatus to occur between a test accepted as valid for the scientific community and legislative recognition of that fact.<sup>59</sup>

Furthermore, the court noted that the legislature may broaden the categories of blood tests which may be received into evidence to include those offered by the petitioner, but until such time, the court was not free to enlarge that area of the statute.<sup>60</sup>

The failure of the legislature to include particular tests in the language of the statute cannot be treated as a mere oversight. The *Lorraine* court's reasoning, however, is not readily applicable to Virginia because the Virginia legislature has indicated its acceptance of the HLA blood test by its specific inclusion of that test in section 20-61.1.<sup>61</sup> In addition, the language of section 20-61.2 is broad enough to encompass HLA testing even though such testing may not have been specifically in the mind of the legislature when the statute was enacted.<sup>62</sup>

#### B. The Language of Section 20-61.2

Section 20-61.2 provides that "in the trial of any matter in any court in which the question of paternity arises, the court . . . upon motion of either party, may direct and order that the alleged father, the mother and child shall submit to blood grouping tests."<sup>63</sup>

silent on RBC enzyme and serum protein testing. *Id.* at 925, 455 N.Y.S.2d at 50. The RBC enzyme and serum protein tests, when combined with the HLA test, can exclude paternity with a 99.95% certainty. Sussman & Gilja, *Blood Grouping Tests for Paternity and Nonpaternity*, 1981 N.Y. ST. J. MED. 343, 345.

<sup>59. 115</sup> Misc. 2d at 925, 455 N.Y.S.2d at 50.

<sup>60.</sup> Id.

<sup>61.</sup> Because paternity tests are being improved every year, as more genetically precise blood and enzyme tests are developed, it seems implausible that the legislature should have to address specifically each new blood test as it becomes accepted in the scientific community. The statutes would soon become overburdened with inclusionary lists. The solution is to use the generic term "blood testing" to include all blood tests which have been demonstrated as having scientific validity. For a summary of the latest developments in paternity blood tests, see *Paternity Suit Tests Improved*, Richmond Times-Dispatch, Jan. 17, 1985, at C5, col. 1.

<sup>62.</sup> See Johnson, supra note 13, at 26.

<sup>63.</sup> VA. CODE ANN. § 20-61.2 (Repl. Vol. 1983). The statute provides:

<sup>&#</sup>x27; In the trial of any matter in any court in which the question of paternity arises,

To use HLA test results at all under section 20-61.2, the HLA test must be considered a blood grouping test.

The principal argument of those who oppose<sup>64</sup> including HLA within the definition of a blood test is that HLA testing can be done without drawing blood. Despite the name "leukocyte antigen," HLA testing involves antigens found in most tissues of the body, including the liver and kidneys.<sup>65</sup> Whiteman v. Kelley,<sup>66</sup> a paternity case recently decided by the Virginia Supreme Court, addressed the issue of whether section 20-61.2 gives a physician the discretion to perform an HLA test when blood tests are ordered by the court.<sup>67</sup> In Whiteman, the court observed that the reliability of HLA tests "can hardly be questioned in view of the action of the General Assembly in expressly authorizing such tests under the 1982 amendment to § 20-61.1."<sup>68</sup> The court also noted that blood grouping tests, including HLA tests, are admissible as probative evidence regardless of sections 20-61.1 or 20-61.2.<sup>69</sup>

A description of HLA as a tissue test does not compel the conclusion that it is not a blood test. Blood is in fact a "fluid tissue which circulates . . . [and] supplies oxygen and nutrients to the other tissues of the body . . . ."<sup>70</sup> Accordingly, the HLA test appropriately may be called both a tissue test and a blood test.

66. No. 821373 (Va. Sup. Ct. April 26, 1985).

69. Id. at 15.

regardless of any presumptions with respect to paternity, the court before whom the matter may be brought, upon motion of either party, may direct and order that the alleged father, the mother and child submit to blood grouping tests. The court, in its discretion, may require the person requesting such blood grouping tests to pay the cost thereof. The results of such blood grouping tests shall be admitted in evidence when offered by a duly licensed and certified practicing physician or other qualified scientist.

<sup>64.</sup> Because of the high probability of exclusion (or inclusion) of paternity based on HLA testing, putative fathers have an interest in arguing that the HLA test is not a blood test under § 20-61.2.

<sup>65.</sup> J. BARRETT, TEXTBOOK OF IMMUNOLOGY 386-87 (3d ed. 1978). Cells named lymphocytes are typically used in HLA testing. See, e.g., id. at 391-93. Interestingly, it can be argued that HLA typing is not covered by statutes that preclude the admission of "blood tests" into evidence as proof of paternity. See, e.g., Ahmad v. Ahmad, 8 FAM. L. REP. (BNA) 2360 (D.C. Super. 1982); Pollard v. Sell, 7 FAM. L. REP. (BNA) 2548 (Ohio App. 1981); Phillips v. Jackson, 615 P.2d 1228 (Utah 1980).

<sup>67.</sup> Brief for Appellant at 8, Whiteman v. Kelley, No. 821373 (Va. Sup. Ct. filed June 7, 1983). The expert who performed the paternity blood tests as directed by the court testified that he had performed "genotyping (blood grouping) tests" and "considered HLA typing appropriate" in such a case. *Id.* at 9.

<sup>68.</sup> Whiteman, No. 821373, slip op. at 16 (Va. Sup. Ct. April 26, 1985).

<sup>70.</sup> BLAKISTON'S GOULD MEDICAL DICTIONARY 181 (4th ed. 1979).

Besides the medical categorization of HLA testing, the HLA test should be admissible under section 20-61.2 because only then is its intended purpose of establishing paternity or exonerating innocent putative fathers<sup>71</sup> best served. The HLA tissue testing or blood testing procedure is analogous to red blood cell typing using the ABO blood group system. In both, it is not the blood itself which is tested, but rather the constituents of blood, from which conclusions may be drawn based on Mendelian laws of inheritance.72 It is possible under the ABO system to determine to a statistical probability that a parent and child will each have a particular antigen in his red blood cells.73 The advantage of the HLA test is that it may disclose rare antigens on the cells which a parent and a child have in common because of genetic inheritance rather than mere chance.<sup>74</sup> Some courts have reasoned that, since it is in the interest of all the parties to have paternity established as accurately as possible, it is unreasonable not to utilize a test as reliable and accurate as the HLA test.<sup>75</sup> These courts have broadly interpreted the paternity statutes. In J.H. v. M.H.,<sup>76</sup> the New Jersev Superior Court noted that in a paternity action, it must consider the best interests of the child and "an evidential interpretation which might prevent a child from ever knowing its natural parent is [not] consistent with this judicial philosophy . . . . "77

The HLA test is properly considered both a blood test and a tissue test. The reliability and accuracy of the test, its potential impact on the resolution of paternity questions, and the public policy which calls for a determination of paternity compel the conclusion that the HLA test is indeed a blood test within the contemplation of section 20-61.2.

<sup>71.</sup> Experts on histocompatibility refer to the HLA test alternatively as a tissue test and a blood test. See, e.g., Terasaki, supra note 13. Most experts consider HLA typing appropriate for inclusion in a court order under § 20-61.2. See, e.g., Whiteman.

<sup>72.</sup> See supra notes 5-24 and accompanying text.

<sup>73.</sup> Id.

<sup>74.</sup> See supra notes 13-16 and accompanying text.

<sup>75.</sup> See, e.g., Crain v. Crain, 104 Idaho 666, 671-73, 662 P.2d 538, 540-44 (1983); J.H. v. M.H., 177 N.J. Super. 436, 439-41, 426 A.2d 1073, 1074-75 (1980); Pratt v. Victor B., 112 Misc. 2d 487, 489, 448 N.Y.S.2d 351, 352 (N.Y. Fam. Ct. 1982).

<sup>76. 177</sup> N.J. Super. 436, 426 A.2d 1073.

<sup>77.</sup> Id. at 439, 426 A.2d at 1075.

#### HLA BLOOD TESTS

#### V. Use of the HLA Test to Prove Rather Than Exclude Paternity

Prior to the 1982 amendment to section 20-61.1,<sup>78</sup> the HLA test was not admissible for any purpose in proceedings governed by that section.<sup>79</sup> Since 1982, however, the HLA test may be used under section 20-61.1 as affirmative evidence that a man is the father of a particular child.<sup>80</sup> Of course, section 20-61.1 only prescribes the types of evidence admissible to prove paternity in civil and criminal proceedings for the support of children of unwed parents.<sup>81</sup> Section 20-61.2, on the other hand, addresses the use of blood tests in trials of all other matters in which paternity is at issue.<sup>82</sup> The Supreme Court of Virginia has yet to rule whether blood grouping tests are admissible under section 20-61.2 to prove rather than exclude paternity.<sup>83</sup>

#### A. The Express Statutory Language of Section 20-61.2

Section 20-61.2 now provides that when the question of paternity arises a court may "upon motion of either party" order the mother, child, and alleged father to submit to blood grouping tests.<sup>84</sup> The statutory language sheds little light on the permissible evidentiary use of the HLA test. In *Whiteman v. Kelley*,<sup>85</sup> the appellee suggested that the words "upon motion of either party" sanction the use of the HLA test as affirmative proof of pater-

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<sup>78.</sup> That amendment added to the types of evidence admissible to show paternity the "[r]esults of medically reliable genetic blood grouping tests, which tests may include the human leukocyte antigen (HLA) test." VA. CODE ANN. § 20-61.1(5) (Repl. Vol. 1983).

<sup>79.</sup> See supra text accompanying notes 25-27.

<sup>80.</sup> VA. CODE ANN. § 20-61.1 (Repl. Vol. 1983).

<sup>81.</sup> See supra text accompanying notes 28-44.

<sup>82.</sup> VA. CODE ANN. § 20-61.2 (Repl. Vol. 1983).

<sup>83.</sup> In Jones and Whiteman, the appellants, each having been adjudicated the father of appellee's child and ordered to pay child support, argued on appeal that the HLA test is not admissible as affirmative evidence of paternity under § 20-61.2. Brief for Appellant at 3, Jones v. Robinson, No. 820855 (Va. Sup. Ct. filed May 19, 1983); Brief for Appellant at 10, Whiteman v. Kelley, No. 821373 (Va. Sup. Ct. filed June 7, 1983). In Hankerson v. Moody, the trial court admitted into evidence, over the putative father's objection, testimony of the mother's expert physician witnesses that (1) the HLA test did not exclude appellee as the father; and (2) the HLA test established appellee as the father to a probability of 99.95 percent. Brief for Appellant at 23, Hankerson v. Moody, No. 812211 (Va. Sup. Ct. filed Jan. 19, 1983). The precise question whether the HLA test can be used to prove paternity is not, however, at issue in that appeal. *Id*.

<sup>84.</sup> VA. CODE ANN. § 20-61.2 (Repl. Vol. 1983).

<sup>85.</sup> No. 821373 (Va. Sup. Ct. April 26, 1985).

nity.<sup>86</sup> Otherwise, appellee asks, "[u]nder what circumstances would it possibly be beneficial to the moving party to request a blood grouping test if the results were only admissable [sic] for the purpose of defeating her case and could not be admitted for the purpose of proving it[?]"<sup>87</sup>

The Virginia Supreme Court answered this presumably rhetorical question by stating that:

[i]t appears that § 20-61.2 was enacted to permit in divorce or support proceedings the admissibility of evidence of a blood grouping test only to determine whether a putative father could not be the biological father. A husband might move for such a test to exclude himself as father . . . A wife, on the other hand, might move for such a test to show that her husband could not be excluded as the father.<sup>88</sup>

Courts in other jurisdictions have split on the meaning of language permitting blood tests to be ordered on "motion of either party."

In 1976, New York's statute relating to the use of blood tests in paternity proceedings was amended to permit the court to order a blood test on motion of any party.<sup>89</sup> The New York Family Court viewed the addition of this language as merely making blood testing available to the male upon request, whether he was the petitioner or respondent.<sup>90</sup> Significantly, the court did not permit the "motion of any party" language to change the statute's original purpose of benefiting putative fathers who deny paternity by allowing test results only to exclude paternity.<sup>91</sup>

The Kansas statute, which is similar to section 20-61.2,<sup>92</sup> has been interpreted to permit the admission of the HLA test if it is probative and the expert testimony with respect to the test is reliable.<sup>93</sup> Moreover, the Kansas Court of Appeals has expressly ruled

93. See State v. Blackman, 233 Kan. 223, 231, 662 P.2d 1183, 1190 (1983).

<sup>86.</sup> Brief for Appellee at 7-8, Whiteman v. Kelley, No. 821373 (Va. Sup. Ct. filed June 7, 1983).

<sup>87.</sup> Id. at 8.

<sup>88.</sup> Whiteman, No. 821373, slip op. at 9.

<sup>89.</sup> N.Y. Jud. Law § 532 (McKinney 1983) (1977 version).

<sup>90.</sup> Jane L. v. Rodney B., 103 Misc. 2d 9, 11, 425 N.Y.S.2d 235, 237 (Fam. Ct. 1980). 91. Id.

<sup>92.</sup> KAN. STAT. ANN. § 23-131 (1981). The statute provides in pertinent part: "[W]henever the paternity of a child is in issue in any action or judicial proceeding in which the mother and alleged father of such child are parties, the court . . . may order the mother, child and alleged father to submit to blood tests . . . ."

that the statute does not limit the use of the test results solely to exclude paternity.<sup>94</sup>

Some state statutes restrict the admission of blood test evidence in paternity proceedings to those tests which definitely exclude paternity.<sup>95</sup> Despite such statutes, courts in those states have admitted HLA test results as affirmative evidence of paternity.<sup>96</sup> For example, a New Jersey statute, prior to its repeal, authorized the admission of one or more blood grouping tests only when the tests definitely excluded paternity.<sup>97</sup> In J.H. v. M.H.,<sup>98</sup> however, the Superior Court of New Jersey permitted the wife in a divorce suit to offer results of an HLA test into evidence as proof that a third party, and not her husband, was the father of a child born during her marriage. To overcome the express statutory language, the court emphasized the accuracy and reliability of the HLA test in proving paternity as well as the child's recognized right to know the identity of his parents. In the court's view, the New Jersey legislature had not intended to preclude litigants from using scientific tests developed after the statute was enacted.<sup>99</sup>

Similarly, in *Crain v. Crain*,<sup>100</sup> the Supreme Court of Idaho admitted HLA test results as affirmative proof of paternity even though Idaho's statute expressly limited blood test evidence to that which excluded paternity.<sup>101</sup> To justify its ruling, the court noted the accuracy and reliability of the HLA test in proving paternity, its tissue-typing nature, and the interests of the child and

98. 177 N.J. Super. 436, 426 A.2d 1073.

100. 104 Idaho 666, 662 P.2d 538 (1983).

<sup>94.</sup> Tice v. Richardson, 7 Kan. App. 2d 509, 513, 644 P.2d 490, 493 (1982).

<sup>95.</sup> E.g., N.J. STAT. ANN. § 2A:83-3 (West 1976) (repealed 1983 N.J. Laws ch. 17, § 23). 96. J.H. v. M.H., 177 N.J. Super. 436, 426 A.2d 1073 (Ch. Div. 1980).

<sup>97.</sup> Section 2A:83-3 before its repeal provided in pertinent part that "[w]henever such [a blood grouping] test is ordered and made, the testimony of the experts to the results thereof . . . shall be receivable in evidence, but only in cases where definite exclusion is indicated." N.J. STAT. ANN. § 24:83-3 (West 1976) (emphasis added) (repealed 1983 N.J. Laws ch. 17, § 23). In 1983, the New Jersey legislature enacted a new statute relating to blood test evidence in paternity proceedings. See N.J. STAT. ANN. § 9:17-51 (Cum. Supp. 1984-85). That statute authorizes the admissibility of blood or genetic tests when they definitely exclude paternity and permits the HLA test to establish the positive probability of parentage. Id. § 9:17-51(e).

<sup>99.</sup> Id. at 439-41, 426 A.2d at 1074-76.

<sup>101.</sup> See IDAHO CODE § 7-1115 (1979) (repealed by 1982 Idaho Sess. Laws ch. 127, § 1). Idaho's current version of § 7-1115 permits, as affirmative evidence of paternity, blood test results, the statistical probability of paternity based on blood test results and other medical, scientific or genetic evidence of paternity based on tests performed by experts. Id. § 7-1115(3)-(5) (Cum. Supp. 1984).

society in establishing paternity.

In Goodrich v. Norman,<sup>102</sup> the court took a different approach from the Idaho and New Jersey courts. In dicta it expressed concern that the New York statute which admitted evidence of blood tests, including the HLA test, only in cases where definite exclusion is established<sup>103</sup> may be violative of due process.<sup>104</sup> The court, noting that all relevant evidence is admissible under the Federal Rules of Evidence,<sup>105</sup> urged the legislature to re-examine the statute in the light of the reliability of the HLA blood test.<sup>106</sup> Significantly, the New York statute was later amended to permit HLA test results to be used as affirmative evidence of paternity.<sup>107</sup>

The Virginia statute does not expressly limit the admission of blood test results to those which exclude a putative father. To the contrary, the wording of the statute, which focuses on "the results" of the testing, appears broad enough to admit a prediction of the probability of paternity where there has not been an exclusion.<sup>108</sup> In light of these considerations, as well as public policy and due process considerations,<sup>109</sup> blood test results, including the HLA test, should be admissible to prove as well as disprove paternity.

#### VI. THE WEIGHT OF HLA TEST RESULTS AS EVIDENCE

Assuming the results of HLA testing are admissible to prove as well as disprove paternity, the question remains what weight should such evidence be accorded by the trier of fact. Section 20-61.1 indicates that substantial weight may be given such evidence.<sup>110</sup> The statute provides that paternity may be shown by

110. VA. CODE ANN. § 20-61.1 (Repl. Vol. 1983). For full text of the statute, see supra

<sup>102. 100</sup> Misc. 2d 33, 421 N.Y.S.2d 285 (Fam. Ct. 1979).

<sup>103.</sup> N.Y. FAM. CT. ACT § 532 (McKinney 1983).

<sup>104. 100</sup> Misc. 2d at 39, 421 N.Y.S.2d at 289.

<sup>105.</sup> FED. R. EVID. 402. It is noteworthy that in Virginia law, evidence which tends to establish the probability or improbability of any fact in issue is relevant. See Essex v. Commonwealth, <u>Va.</u>, 322 S.E.2d 216 (1984).

<sup>106. 100</sup> Misc. 2d at 39, 421 N.Y.S.2d at 289. The original statutory restriction on admissibility of blood tests was caused by the inconclusiveness of the traditional blood grouping tests.

<sup>107.</sup> N.Y. FAM. CT. ACT § 532 (McKinney 1983). The legislative history of the amendment indicates that its purpose was to provide that the results of recognized scientific tests, which indicate with a high degree of certainty the probability of a particular individual being the father of a child, be received in evidence in paternity and support proceedings. See Pratt v. Victor B., 112 Misc. 2d 487, 448 N.Y.S.2d 351 (Fam. Ct. 1982).

<sup>108.</sup> Johnson, supra note 13, at 26.

<sup>109.</sup> See supra text accompanying notes 101-08.

"other evidence beyond reasonable doubt, . . . [s]uch other evidence" including "[r]esults of medically reliable genetic blood grouping tests, which tests may include the human leukocyte antigen (HLA) test."<sup>111</sup> There is no indication in the wording of the statute that such evidence standing alone is insufficient to satisfy the beyond a reasonable doubt standard. However, the language of section 20-61.1 does not expressly indicate the weight blood test results should be accorded.<sup>112</sup>

It has been well established that blood group testing may be used conclusively to prove that a man is *not* the biological father of a particular child.<sup>113</sup> The legislatures and courts of most states, however, have been reluctant to assign such heavy weight to the same type of evidence when it demonstrates paternity. Blood test evidence necessarily deals in probabilities.<sup>114</sup> The probability of paternity should therefore not be entitled to the decisive weight accorded evidence which excludes parentage. Even the scientific accuracy and reliability of the HLA test does not make the courts less cautious about the nature of probabilities. In a Texas case, the court declared that "[e]ven probabilities that are high do not necessarily compel a particular finding as a matter of law."<sup>115</sup> The court stated that results showing a high probability of parentage standing alone do not necessarily equate with a preponderance of the evidence.<sup>116</sup>

In Crain v. Crain,<sup>117</sup> the court held that the HLA test should be considered along with all other evidence. This view seems to reflect the majority position of the courts on the question.<sup>118</sup> A New York court has held that the HLA blood test "is highly accurate on the issue of paternity, and should be accorded great weight."<sup>119</sup> It is unclear from the court's language, however, whether the "great

note 25.

<sup>111.</sup> VA. CODE ANN. § 20-61.1(5) (Repl. Vol. 1983).

<sup>112.</sup> Id. § 20-61.1.

<sup>113.</sup> See, e.g., Little v. Streater, 452 U.S. 1 (1981); In re E.G.M., 647 S.W.2d 74 (Tex. Ct. App. 1983). For a case which reviews the weight accorded exclusionary test results among the jurisdictions, see Hanson v. Hanson, 311 Minn. 388, 390-91, 249 N.W.2d 452, 453 (1977).

<sup>114.</sup> See AMA-ABA Guidelines, supra note 11, at 260-63 (correlating percentages of probability of paternity with the likelihood of paternity).

<sup>115.</sup> In re E.G.M., 647 S.W.2d at 78.

<sup>116.</sup> Id.

<sup>117. 104</sup> Idaho 666, 673, 662 P.2d 538, 545 (1983).

<sup>118.</sup> See, e.g., id.; State v. Vinsand, 318 N.W.2d 208 (Iowa 1982); Perry v. Commonwealth, 652 S.W.2d 655 (Ky. 1983); Turek v. Hardy, 312 Pa. Super. 158, 458 A.2d 562 (1983).

<sup>119.</sup> Bowling v. Coney, 91 A.D.2d 1195, 1196, 459 N.Y.S.2d 183, 184 (1983).

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weight" to be given to the HLA test results is conclusive weight, presumptive weight, or merely some weight. Nevertheless, that court's language does reflect a growing judicial recognition of the reliability of the HLA test.

In the absence of guidance from the legislature, a court in its discretion, may instruct the jury as to the weight to be given the HLA test results or it may leave the jury to decide what weight to accord such evidence. Ultimately, the weight to be given blood tests, including the HLA test, is a legislative question. The Virginia General Assembly should decide the weight to be accorded these tests.<sup>120</sup> In light of the accuracy and reliability of the HLA test and the continuing scientific advances in blood testing,<sup>121</sup> it is hoped that Virginia will join the increasing number of jurisdictions which expressly give the HLA test the great evidentiary weight it deserves.

#### VII. CONCLUSION

Recent developments in the Virginia legislature and courts indicate that Virginia recognizes the accuracy and reliability of the HLA test in paternity actions. It is now clear that section 20-61.1 applies to both civil and criminal proceedings. Moreover, admission of the HLA test as a valid blood test has been approved by the Virginia Supreme Court.

What remains unanswered is the weight of evidence to be afforded the HLA test. The potential impact of HLA testing on all civil and criminal proceedings involving an issue of paternity in Virginia is significant.

<sup>120.</sup> See Reid v. White, 112 Misc. 2d 294, 446 N.Y.S.2d 991 (N.Y. Fam. Ct. 1982); State v. Camp, 286 N.C. 148, 209 S.E.2d 754 (1974). The Virginia Supreme Court recently had the opportunity to address the appropriate evidentiary weight of the HLA test, but declined to do so, suggesting that this is a task for the legislature. *Cf. Jones*, slip. op. at 14 (noting that the General Assembly may impose a more rigorous standard of proof than the preponderance standard in paternity cases because of the "lurking problems" associated with proving paternity).

<sup>121.</sup> See supra note 61, for a newspaper article on the latest advancements in blood analysis.