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ALMOST daily, newspapers recount the details of another automobile accident or airplane crash in which numerous persons are killed—a common disaster. And determination of survivorship in common disaster cases presents some of the most vexing problems that lawyers and judges meet. Lawyers must search for evidence, frequently hard to obtain, and then must face difficult questions of relevancy, materiality, and probative value, since in almost all cases where any evidence is available it is wholly circumstantial. Judges must decide preliminary disputes over who shall bear the burden of proof, and then must rule on the sufficiency of evidence, which is usually sparse. And if, as in fully half the cases, there is no evidence tending to prove survivorship, both lawyers and judges must wrestle with a question which cannot be solved except arbitrarily.[1]

On this last question much has been written. But strangely enough, almost no attention has been given to the questions which arise when it is sought to establish survivorship by proof, a course which all courts agree is open to litigants in common disaster cases. The writers propose, therefore, to suggest some of these questions, to point out possible sources of evidence of survivorship, and to indicate how courts may be expected to deal with such evidence. But first it is necessary to know what is a common disaster and why survivorship must be determined.

I

NATURE OF THE PROBLEM

A. *What Is a Common Disaster?*

To state what is a common disaster truly involves consideration

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[1] This last problem so perplexed Lord Mansfield in The King v. Hay, 1 Wm. Black. 640, 96 Eng. Rep. 372 (1767), that he admitted he knew of no legal principle upon which he could decide it and advised the parties to compromise their claims, according to argument of counsel in Wright v. Sarmuda, reported in a note to Taylor v. Diplock, 2 Phill. Ecc. 261, 161 Eng. Rep. 1137 (1815). Compare Pell v. Ball, 1 Cheves. Eq. (S. C.) 99 at 100 (1840), where Chancellor Johnston said: "it would seem, at first view, that there are no rules of reason, or of law, by which the case can be decided; and yet . . . a refusal to decide, would be a decision. . . ."

". . . of most disastrous chances,
Of moving accidents by flood and field,
Of hairbreadth scapes. . . ."[2]

And the answer is not easily formulated, for the fact situations which courts have treated as common disasters are endlessly variant. Thus where two or more persons were killed in a cyclone,[3] in an automobile running off the road[4] or colliding with a train,[5] in a train wreck,[6] in a shipwreck,[7] in a flood,[8] in an earthquake,[9] in a fire,[10] in an airplane crash,[11] in an explosion,[12] in the Boxer[13] and Sepoy[14] rebellions, in the collapse of a house[15] or bridge,[16] by gas fumes,[17] or by freezing,[18] and the survivorship of one or more was in issue, the court considered the event a common disaster.[19]

But while it is true that an infinite number of variations in facts is possible, in general it may be said that whenever two or more persons die under such circumstances that it is difficult or impossible to deter-

[2] OTHELLO, Act 1, scene 3, lines 184-186.

[3] Fleming v. Grimes, 142 Miss. 522, 107 So. 420 (1926); Re McCabe Estates, 69 Dom. L. R. (Sask.) 730 (1922).

[4] Miller v. McCarthy, 198 Minn. 476, 270 N. W. 559 (1936); Warwicker v. Toronto General Trusts Corp., [1936] 3 Dom. L. R. (Ont.) 368.

[5] Robson v. Lyford, 228 Mass. 318, 117 N. E. 621 (1917); Sovereign Camp v. McKinnon, (D. C. Ga. 1931) 48 F. (2d) 383; In re Nightingale, 71 SOL. J. 542 (Ch. Div. 1927).

[6] Kansas Pac. Ry. v. Miller, 2 Colo. 442 (1874); Estate of Roby, [1913] Prob. 6; Goods of Wheeler, 31 L. J. (N. S.) (P. M. & A.) 40 (1861).

[7] Smith v. Croom, 7 Fla. 81 (1857); Wing v. Angrave, 8 H. L. C. 183, 11 Eng. Rep. 397 (1860); Hartshorne v. Wilkins, 6 Nova Scotia 276 (1866); Goods of Doherty, 6 Newfound. 515 (1883); Reid v. Reid, 29 New Zealand L. R. 124 (1909); Palmer v. Muir, 4 Queens. L .J. R. 46 (Aus. 1890); Re Phillips, 12 Ont. L. R. 48 (1906).

[8] Cowman v. Rogers, 73 Md. 403, 21 A. 64 (1891).

[9] Grand Lodge A. O. U. W. v. Miller, 8 Cal. App. 25, 96 P. 22 (1908).

[10] Will of Ehle, 73 Wis. 445, 41 N. W. 627 (1889).

[11] Matter of Strong, 171 Misc. 445, 12 N. Y. S. (2d) 544 (1939).

[12] Baldus v. Jeremias, 296 Pa. 313, 145 A. 820 (1929).

[13] Goods of Beynon, [1901] Prob. 141.

[14] Greene's Settlement, L. R. 1 Eq. 288 (1865).

[15] Goods of Thompson, 22 L. T. R. (O. S.) 292 (Ecc. 1854).

[16] In re Hall, 12 CHI. LEG. NEWS 68, 9 CENT. L. J. 381 (1879) (Probate Court, Cook County, Illinois).

[17] Tovey v. Geiser, 150 Kan. 210, 92 P. (2d) 3 (1939); Re Coup, 147 L. T. 168 (1919).

[18] Fitzgerald v. Ayres, (Tex. Civ. App. 1915) 179 S. W. 289.

[19] The first case where these principles could have been applied seems to be the famous double hanging in Broughton v. Randall, Cro. Eliz. 403, 78 Eng. Rep. 752 (1596). Apparently, too, it need not be a case where at least two persons are killed. See Durrant v. Friend, 5 De G. & Sm. 343, 64 Eng. Rep. 1145 (1851), where the question was whether a man or his chattels "survived."

mine which survived the others, the occurrence is a common disaster.[20] The term "common disaster," as thus defined, embraces not only all of the situations just referred to, but others of a somewhat different nature. It includes the situation where *A* and *B*, husband and wife, die in Ann Arbor and Lansing respectively, at approximately the same hour.[21] It includes the case where a woman in labor dies, and the doctor performs a Caesarian section to deliver a child which also dies.[22] It includes the case where a woman falls prostrate, her husband goes for help, returns and then, in the resulting confusion, both die.[23] And it also includes the case where *A* and *B* are murdered by *C*,[24] or where *A* kills *B* and then kills himself.[25]

Admittedly, the writers define common disaster more broadly than many courts do. But some element of unusual calamity, something in the nature of an accident or an act of God, seems unnecessary. For whenever there is uncertainty as to survivorship, it appears desirable that the case be brought within the purview of any applicable statutes, presumptions, or provisions of a will, trust instrument, or insurance policy.[26]

[20] The writers table the philosophical and biological questions as to when a person dies, since courts refuse to consider them. However, see the interesting argument in the dissent in In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 743 (1913). And see Bennett v. Peattie, 57 Ont. L. R. 233 (1925).

[21] See Ommaney v. Stilwell, 23 Beav. 328, 53 Eng. Rep. 129 (1856); Sporrer v. Ady, 150 Md. 60, 132 A. 376 (1926).

[22] Taylor v. Cawood, (Mo. 1919) 211 S. W. 47. See 1 BECK, MEDICAL JURISPRUDENCE, 12th ed., 641 (1863), for a similar case.

[23] In re Lott, 65 Misc. 422, 121 N. Y. S. 1102 (1909).

[24] Hollister v. Cordero, 76 Cal. 649, 18 P. 855 (1888); Watkins v. Home Life & Acc. Ins. Co., 137 Ark. 184, 208 S. W. 587 (1919); Evans v. Halterman, 31 Ohio App. 175, 165 N. E. 869 (1928); Wall v. Pfanschmidt, 265 Ill. 180, 106 N. E. 785 (1914); Roberts v. Hardin, 179 Ga. 114, 175 S. E. 362 (1934).

[25] Broome v. Duncan, (Miss. 1901) 29 So. 394; In re Marttinen, 171 Minn. 475, 214 N. W. 469 (1927); Bierbrauer v. Moran, 244 App. Div. 87, 279 N. Y. S. 176 (1935). In Union Central Life Ins. Co. v. Elizabeth Trust Co., 119 N. J. Eq. 505, 183 A. 181 (1936), the court said that such a murder is not a common disaster. This distinction is opposed to the clear weight of authority and is expressly denied recognition in Roberts v. Hardin, 179 Ga. 114, 175 S. E. 362 (1934).

[26] In Modern Woodmen of America v. Parido, 253 Ill. App. 68 (1928), affd. 335 Ill. 239, 167 N. E. 52 (1929), the court said that "common disaster," as used in an insurance contract, contemplated a case where it was impossible to determine survivorship. While the holding of the case probably accords with the intent of the parties, such a definition of common disaster seems too restricted. It should be noted, too, that "common disaster," "same calamity," "common calamity," or "same event" all contemplate the same thing.

B. *Why It Becomes Necessary to Establish Survivorship*

Uncertainty as to the survivorship of commorientes,[27] which the writers make part of their definition of a common disaster, naturally suggests the next problem—why it becomes necessary in these cases to establish survivorship. Actually it is necessary only when the solution of some other legal problem requires it. Fortunately, the number of "other legal problems" is comparatively small.[28]

In the great majority of cases, descent and distribution of commorientes' property will present the problems requiring determination of survivorship. For example, *A* devises all his property to *B*, and and then *A* and *B* die in a common disaster. If *B* survived, then *B's* heirs will inherit, but if *A* survived then *A's* heirs take by intestacy.[29] Here the question may arise when the estate is distributed or in some other action.[30] Or for another example, *A* and *B* are husband and wife and die intestate in a common disaster. If *B* survived, *B's* daughter will inherit *B's* statutory share of *A's* estate. If *A* survived, she will not.[31] While innumerable minor variations such as lapse statutes or peculiar wording in wills[32] may complicate the problem, these two simple examples fairly illustrate the general question.

Most of the remaining cases involve the disposition of proceeds of insurance policies, really an aspect of the question last discussed. Here in the typical case *A* insures his life naming *B* as his beneficiary. Then *A* and *B* die in a common disaster.[33] Ordinarily the question will arise

[27] The term "commorientes" denotes persons killed in a common disaster. 1 BOUVIER, LAW DICTIONARY, 8th ed., 569 (1914). The writers use it for convenience.

[28] See generally Chapman, "Presumption of Survivorship," 62 UNIV. PA. L. REV. 585 (1914); Whittier, "Problems of Survivorship," 16 GREEN BAG 237 (1904).

[29] Carpenter v. Severin, 201 Iowa 969, 204 N. W. 448 (1925). See also Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903); Wing v. Angrave, 8 H. L. C. 183, 11 Eng. Rep. 397 (1860). For the reports of this last case in the lower courts, see Goods of Underwood, 22 L. T. R. (O. S.) 292 (Ecc. 1853); Underwood v. Wing, 19 Beav. 459, 52 Eng. Rep. 428, 4 De G. M. & G. 633, 43 Eng. Rep. 655 (1854).

[30] In Carpenter v. Severin, 201 Iowa 969, 204 N. W. 448 (1925), the question came up on a bill to quiet title.

[31] Graybill v. Brown, 194 Iowa 290, 189 N. W. 726 (1922). See also Sweeney's Estate, 78 Pa. Super. 417 (1922); Johnson v. Merithew, 80 Me. 111, 13 A. 132 (1888); In re Marttinen, 171 Minn. 475, 214 N. W. 479 (1927).

[32] On this point see Wislizenus, "Survival in Death by Common Disaster," 6 ST. LOUIS L. REV. 1 (1921).

[33] See McGowin v. Menken, 223 N. Y. 509, 119 N. E. 877 (1918); Union Central Life Ins. Co. v. Elizabeth Trust Co., 119 N. J. Eq. 505, 183 A. 181 (1936); Noller v. Aetna Life Ins. Co., 142 Kan. 35, 46 P. (2d) 22 (1935); Deyo v. Grosfeld, 163 Misc. 27, 294 N. Y. S. 1010 (1936).

between *A's* and *B's* heirs when the proceeds are distributed,[34] or when *B's* administrator sues the insurance company which impleads *A's* administrator.[35]

There are a few other instances where determination of survivorship is necessary. Thus to establish his right to maintain a suit for wrongful death, it may be necessary for decedent's administrator to show that decedent's father and mother, killed in the same disaster, did not survive decedent.[36] Or, although the claimant would receive the property in any event, whether or not *A* survived *B* may determine whether the claimant takes the property directly from *B* or through *A's* administrator.[37] And in England determination of survivorship may govern the form of verification of a petition for administration or decide to whom administration will be granted.[38]

II

IMPORTANCE OF SECURING AND OFFERING EVIDENCE TENDING TO PROVE SURVIVORSHIP

Once it is established that the case involves a common disaster where determination of survivorship is required, the importance of securing and offering all evidence tending to prove that any of the commorientes outlived the others demands special emphasis. Perhaps most significant is the fact that almost without dissent courts agree that the ultimate ownership and enjoyment of property, insurance proceeds, etc., will be governed by a survivorship of only a few seconds duration, the survivor acting merely as a conduit for title.[39] But though

[34] McGowin v. Menken, 223 N. Y. 509, 119 N. E. 877 (1918); Colovos' Admr. v. Gouvas, 269 Ky. 752, 108 S. W. (2d) 820 (1937).

[35] Deyo v. Grosfeld, 163 Misc. 27, 294 N. Y. S. 1010 (1936); Watkins v. Home Life & Acc. Ins. Co., 137 Ark. 207, 208 S. W. 587 (1919).

[36] Garbee v. St. Louis-San Francisco Ry., 220 Mo. App. 1245, 290 S. W. 655 (1927). And see Collins v. Atlantic Coast Line Ry., 183 S. C. 284, 190 S. E. 817 (1936); Pollard v. Gorman, 52 Ga. App. 127, 182 S. E. 678 (1935).

[37] McComas v. Wiley, 134 Md. 572, 108 A. 196 (1919). And see Goods of Carmichael, 4 Sw. & Tr. (Supp.) 224, 164 Eng. Rep. 1502 (1863).

[38] Goods of Wainwright, 1 Sw. & Tr. 257, 164 Eng. Rep. 718 (1858); Goods of Ewart, 1 Sw. & Tr. 258, 164 Eng. Rep. 718 (1859); Goods of Beynon, [1901] Prob. 141; Goods of Good, 24 T. L. R. 493 (Prob. 1908); Goods of Johnson, 78 L. T. R. (N. S.) 85 (Prob. 1897). And see Goods of Alston, [1892] Prob. 142; Goods of Wheeler, 31 L. J. (N. S.) (P. M. & A.) 40 (1861); Estate of Roby, [1913] Prob. 6; Mortimer, Probate Law and Practice, 2d ed., 419-428 (1927).

[39] For example, in Estate of Wallace, 64 Cal. App. 107 at 109, 220 P. 682 (1923), the court said: "If, however, [A survived B] though but for an infinitesimal interval of time, then the bequests [to B] lapsed. . . ." Compare Broughton v. Randall, Cro. Eliz. 502, 78 Eng. Rep. 752 (1596). And see 10 BENCH AND BAR (N. S.) 296 (1915).

this reason alone is enough for urging the importance of securing evidence of survivorship, there are three others.

A. *Evidence and Presumptions of Survivorship*

In the first place, aside from the obvious reason that evidence would be required to prove survivorship the same as any other fact, it may be necessary to rebut a presumption of survivorship adverse to the claim of a particular litigant. It is true that the great majority of American and English courts have refused to acknowledge any presumptions of survivorship in common disaster cases, although the Roman and French law had more or less elaborate ones based on the age and sex of the commorientes.[40] Absent evidence sufficient to establish survivorship, the common-law courts have regarded it as incapable of determination.[41] As Chief Justice Fuller, speaking for the United States Supreme Court, stated in *Young Women's Christian Home v. French:*[42]

> "The rule is that there is no presumption of survivorship in the case of persons who perish by a common disaster, in the absence of proof tending to show the order of dissolution. . . . The question of actual survivorship is regarded as unascertainable. . . ."

Occasionally, however, both in this country and in England, judges have presumed survivorship under certain circumstances. Thus it has been suggested that a husband will be presumed to have survived his

[40] Code Napoleon (1824 translation for Hunter) Art. 720: "If several persons respectively called to the succession of each other, perish by one and the same accident, so that it is not possible to ascertain which of them died first, the presumption of survivorship is determined by the circumstances of the event, and in defect of such, by force of age and sex."

Art. 721: "If those who perished together were under fifteen years, the eldest shall be presumed to have survived. If they were all above sixty, the youngest shall be presumed to have survived. If some were under fifteen years, and others more than sixty, the former shall be presumed to have survived."

Art. 722: "If those who perished together were of the age of fifteen years complete, but less than sixty, the male is always presumed to have survived, where there is equality of age, or if the difference which exists does not exceed one year. If they were of the same sex, the presumption of survivorship which gives rise to succession according to the order of nature must be admitted; thus the younger is presumed to have survived the elder." And see 1 BECK, MEDICAL JURISPRUDENCE, 12th ed., 640-647 (1863).

[41] Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903); Newell v. Nichols, 75 N. Y. 78 (1878) affg. 12 Hun 604 (1878); Carpenter v. Severin, 201 Iowa 969, 204 N. W. 448 (1925), TRACY, CASES AND MATERIALS ON EVIDENCE 48 (1938); Wing v. Angrave, 8 H. L. C. 183, 11 Eng. Rep. 397 (1860).

[42] 187 U. S. 401 at 410, 23 S. Ct. 184 (1903).

wife when both drown in a shipwreck.[43] At least two courts have thought that there is a presumption against the survivorship of any one of the commorientes.[44] And several courts have stated that there is a presumption of simultaneous death.[45] Furthermore, it seems a mere verbal distinction to say, as many other courts say, that there is no presumption of simultaneous death, but, for the purposes of distributing property, the commorientes will be treated "as though" all died at the same time.[46]

Moreover, several state legislatures have thought that this is a matter better governed by statute, and have enacted statutes patterned largely after the presumptions of the civil law.[47] These statutory presumptions never have been thought to exclude the right to establish survivorship by proof where that is possible.[48] In fact, in many cases where statutory presumptions are available, there will be a sharp dispute over whether the evidence of survivorship is such that the case should go to the jury or should be decided by the court through application of the statutory presumptions.[49]

But before passing to the burden of proof rule, there should be

[43] Goods of Selwyn, 3 Hagg. Ecc. 748, 162 Eng. Rep. 1331 (1831); Colvin v. Procurator-General, 1 Hagg. Ecc. 92, 162 Eng. Rep. 518 (1827). Compare Coye v. Leach, 8 Metc. (49 Mass.) 371 at 374 (1844), where Justice Dewey indicated he would suppose an 8 year old girl drowned before her mother or grandfather. See also Greene's Settlement, L. R. 1 Eq. 288 (1865).

[44] Goods of Thompson, 22 L. T. R. (O. S.) 292 (Ecc. 1854); Deyo v. Grosfeld, 163 Misc. 27, 294 N. Y. S. 1010 (1936), misciting Newell v. Nichols, 75 N. Y. 78 (1878).

[45] Kansas Pac. Ry. v. Miller, 2 Colo. 442 at 464 (1874); Walton v. Burchel, 121 Tenn. 715 at 730, 121 S. W. 391 (1907); Stinde v. Goodrich, 3 Redf. (N. Y. Surr.) 87 (1877); Aley v. Missouri Pac. Ry., 211 Mo. 460, 111 S. W. 102 (1908).

[46] Carpenter v. Severin, 201 Iowa 969, 204 N. W. 448 (1925), is a leading exponent of this view, and Judge De Graff gives an excellent review of the cases. See also Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903).

[47] See for example: Cal. Code Civ. Proc. (Deering, 1937), § 1963(40); La. Civ. Code Ann. (Dart, 1932), §§ 936-939. Germany, India, Australia, Puerto Rico, the Philippine Islands, and England have statutes more or less similar. In general, see Wight, "The Law of Survivorship in a Common Disaster," 2 AM. L. SCH. REV. 504 (1911); Banogon, "The Legal Presumptions of Survivorship and Legal Medicine," 7 PHIL. L. J. 383 (1928); Chapman, "Presumption of Survivorship," 62 UNIV. PA. L. REV. 585 (1914); 12 TULANE L. REV. 623 (1938); 11 IOWA L. REV. 93 (1925).

[48] Cal. Code Civ. Proc. (Deering, 1937), § 1963(40). See Succession of Langles, 105 La. 39, 29 So. 739 (1900). And see Sanders v. Simcich, 65 Cal. 50, 2 P. 741 (1884), holding it error to exclude evidence of survivorship.

[49] For example, Robinson v. Gallier, 2 Woods 178, 20 F. Cas. 1006, No. 11, 951 (1875), dealing with the Louisiana presumptions. The somewhat related question of conflict of laws as to what law is applicable is beyond the scope of this article.

noted an occasional failure to distinguish presumptions from inferences from circumstantial evidence.[50] Surrogate Fowler, in *In re Herrmann*,[51] correctly noted the distinction when he stated:

> "where there is any proof, that one of the parties is living when the other party is supposed to be dead, the trier of fact . . . may then consider, under common-law rules of evidence, all the circumstances of the parties whose time of death is in controversy, including their respective ages, sex and health. . . . Such evidence is received not as the basis of a presumption, but as corroborative or otherwise of actual evidence of survivorship."

B. *Burden of Proof Rule*[52]

The second reason why it is important to secure and offer evidence of survivorship is that courts use the well-known rule, that one asserting a fact—here survivorship—has the burden of proving that fact, to decide those otherwise insolvable cases where there is no evidence of survivorship or where the available evidence is insufficient to establish it.[53] This is especially illustrated in the cases where testator and devisee or insured and beneficiary die in the same disaster.

In the normal case of the first type, *A*, the testator, devises property to *B* and either does or does not provide for the contingency that *B* may die first. If he fails to provide for this contingency, the usual solution is to place on *B's* heir the burden of proving survivorship since, absent a lapse statute,[54] *B* must have survived *A* for *B* to take. When *B's* heir fails to make out his case, the property passes by intestacy to *A's* heirs.[55] Many courts say that, if *B's* heirs cannot prove that *B* survived,

[50] For example: Young Women's Christian Home v. French, 187 U. S. 401 at 410, 23 S. Ct. 184 (1903); Coye v. Leach, 8 Metc. (49 Mass.) 371 at 373 (1844).

[51] 75 Misc. 599 at 603, 136 N. Y. S. 944 (1912), affd. sub nom. In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 743 (1913).

[52] See generally, Miller v. McCarthy, 198 Minn. 497, 270 N. W. 559 (1936); Fleming v. Grimes, 142 Miss. 522, 107 So. 420 (1926); McKinney v. Depoy, 213 Ind. 361, 12 N. E. (2d) 250 (1938); Wing v. Angrave, 8 H. L. C. 183, 11 Eng. Rep. 397 (1860); Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903).

[53] This is the type of case which Lord Mansfield refused to decide. See note 1, supra. It is not hard to see why he should be perplexed, for, absent proof, there is no possible way to decide such a case except arbitrarily.

[54] See Carpenter v. Severin, 201 Iowa 969, 204 N. W. 448 (1925).

[55] In re Burza's Estate, 151 Misc. 577, 272 N. Y. S. 248 (1934); Kimmey's Estate, 326 Pa. 33, 191 A. 47 (1937).

the property will descend "as though" both died at the same time.[56] However, the result is the same. In either case the practical effect is to establish a presumption that *A* survived.

Though this result often seems harsh, it is not as unsatisfactory as the one which logically follows if *A* has provided for the possibility that he may survive *B*. In this situation it might make a difference whether he says, "if I survive *B*" or "if *B* die before I do."[57] It is not hard to see why a court, pressing the burden of proof rule to the limit, might conclude that the substitute legatee had the burden if *A* used the first form of expression, and that *B's* heir had the burden if *A* used the second.[58]

Wing v. Angrave,[59] however, is perhaps the most striking example of the results produced by application of the burden of proof rule. There *A* devised property to *B*, gift in default to *C*, and *B* made a similar devise to *A*, gift in default to *C*. The House of Lords concluded that since *C* could not show that either *A* or *B* survived the other in a common disaster he could not claim under either devise.[60] Clearly, the testator's intent was defeated, and it is sufficient to say that at least one American court has refused to apply such formal reasoning.[61]

One more feature of the rule merits comment. It is possible that the result of its application may depend on who sues first. Thus if *A* and *B* are joint tenants of property, whether *A's* or *B's* heir sues first can determine the ultimate ownership of the property since either action must be on the theory that plaintiff's ancestor survived.[62] In this situation the only just result is to decide the case as though the deaths were simultaneous, and this has been the solution since an early day.[63]

[56] Carpenter v. Severin, 201 Iowa 969, 204 N. W. 448 (1925). See 48 CHI. LEG. NEWS 258 (1916); 11 COL. L. REV. 268 (1911). This is true also of cases involving insurance proceeds. See Middeke v. Balder, 198 Ill. 590, 64 N. E. 1002 (1902), affg. 98 Ill. App. 525 (1901), 92 Ill. App. 227 (1900).

[57] See Wislizenus, "Survival in Death by Common Disaster," 6 ST. LOUIS L. REV. 1 at 4 (1921); 13 IND. L. J. 588 (1937).

[58] No case seems directly to have decided this. See Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903). Some of the insurance proceeds cases come very close to it. But compare the reasoning in Whittier, "Problems of Survivorship," 16 GREEN BAG 237 at 239 (1904).

[59] 8 H. L. C. 183, 11 Eng. Rep. 397 (1860).

[60] See also: Newell v. Nichols, 75 N. Y. 78 (1878), affg. 12 Hun 604 (1878); Fuller v. Linzee, 135 Mass. 468 (1883).

[61] On almost identical facts: Fitzgerald v. Agres, (Tex. Civ. App. 1915) 179 S. W. 289, noted in 29 HARV. L. REV. 461 (1916); 64 UNIV. PA. L. REV. 323 (1916). And see 5 WIGMORE, EVIDENCE, 2d ed., § 2532 (1923).

[62] No case has reached this conclusion but logical application of the burden of proof rule makes it inescapable. See Wislizenus, "Survival in Death by Common Disaster," 6 ST. LOUIS L. REV. 1 (1921).

[63] Bradshaw v. Toulmin, Dick. 633, 21 Eng. Rep. 417 (1784); McGhee v.

What has been said of cases of the type just discussed largely disposes of cases of the second type, where insured and beneficiary perish in a common disaster.[64] But one aspect of these cases requires attention. Some courts distinguish between policies where the beneficiary's rights are vested and those where they are contingent, placing the burden of proof on the insured's heirs in the first instance and on the beneficiary's heirs in the second.[65] Many courts ignore the distinction, however, and place the burden of proof of survivorship on the beneficiary's heirs in all cases.[66]

C. *Sufficiency of Evidence of Survivorship*

The third reason why it is important to secure all evidence tending to prove survivorship is that apparently judicial attitudes differ as to what evidence is sufficient to establish it.

Some courts seem to feel that the difficulty in deciding common disaster cases is justification for a liberal view as to the sufficiency of evidence of survivorship. For example, in *Pell v. Ball*,[67] the court said:

> "where there is any evidence whatever [i.e., of survivorship], even though it be but a shadow, it must govern in the decision of the fact."

And in Pollard v. Gorman,[68] it is stated:

> "These general rules [i.e., that survivorship is unascertainable], however, yield where there is actual proof, even though slight and circumstantial."[69]

But many other courts apparently disagree with the view that survivorship should be inferred from slight evidence. Perhaps the

Henry, 144 Tenn. 548, 234 S. W. 509 (1921); Bierbrauer v. Moran, 244 App. Div. 87, 279 N. Y. S. 176 (1935). Compare Vaughan v. Borland, 234 Ala. 414, 175 So. 367 (1937).

[64] Much the same results follow if the burden of proof is not satisfied, and sharp distinctions may be drawn according to how the insured phrases the alternative gift. See 13 IND. L. J. 588 (1938).

[65] United States Casualty Co. v. Kacer, 169 Mo. 301, 69 S. W. 370 (1902), and Supreme Council of Royal Arcanum v. Kacer, 96 Mo. App. 93, 69 S. W. 671 (1902), involving the same disaster and same parties, illustrate the distinction. In the first case the burden was placed on the insured because the beneficiary's rights were vested. In the second it was placed on the beneficiary because the policy was of the fraternal benefit type, making the beneficiary's rights contingent.

[66] McGowin v. Menken, 223 N. Y. 509, 119 N. E. 877 (1918); Masonic Temple Assn. v. Hannum, 120 N. J. Eq. 183, 184 A. 414 (1936); Colovos' Admr. v. Gouvas, 269 Ky. 752, 108 S. W. (2d) 820 (1937); Sovereign Camp v. McKinnon, (D. C. Ga. 1931) 48 F. (2d) 383.

[67] 1 Cheves Eq. (S. C.) 99 at 103 (1840).

[68] 52 Ga. App. 127 at 130, 182 S. E. 678 (1935).

[69] Compare Coye v. Leach, 8 Metc. (49 Mass.) 371 at 373 (1844).

most often quoted statement is that in *Underwood v. Wing*[70] by Justice Wightman:

> "We may guess or imagine or fancy, but the law of England requires evidence. . . ."

And in the same case, Lord Chancellor Cranworth stated:[71]

> "the evidence must be positive, and it is not sufficient to show a variety of circumstances from which it may be very difficult to form an opinion one way or the other."

Nor is this attitude confined to England, for in *Kimmey's Estate*[72] Justice Linn said:

> "The appellants are confronted with the rule that 'in the absence of substantial evidence warranting a definite conclusion as to survivorship . . . they [i.e., the commorientes] will be treated as dying at the same instant. . . .'"

This variance in views is particularly apparent in two fairly recent cases. In *Estate of Wallace*,[73] the California court of appeals held:

> "it is not sufficient that the circumstances of the case be consistent with respondent's theory [i.e., that *B* survived]. They must be inconsistent with any other reasonable theory equally deducible therefrom."[74]

Yet in *Noller v. Aetna Life Ins. Co.*,[75] Justice Smith said:

> "Circumstantial evidence in a civil case, in order to be sufficient to sustain the verdict of a jury, need not rise to that degree of certainty which will exclude any and every other reasonable hypothesis."

These statements are not simply different ways of saying the same thing. For, while it is true that there may be much in the record which judges fail to relay in their opinions, only a difference in view as to sufficiency of evidence of survivorship can reconcile many of the

[70] 4 De G. M. & G. 633 at 657-658, 43 Eng. Rep. 655, 19 Beav. 459, 52 Eng. Rep. 428 (1854).

[71] Ibid., 4 De G. M. & G. 633 at 660.

[72] 326 Pa. St. 33 at 42, 191 A. 47 (1937). In Bennett v. Peattie, 57 Ont. L. R. 233 (1925), the trial judge charged the jury that they must find survivorship beyond a reasonable doubt.

[73] 64 Cal. App. 107 at 113, 220 P. 682 (1923).

[74] Cf. the common statement that the right to rescission for fraud must be proved by clear and convincing evidence.

[75] 142 Kan. 35 at 38, 46 P. (2d) 22 (1935), quoting Chicago R. I. & P. Ry. v. Wood, 66 Kan. 613 at 616, 72 P. 215 (1903).

cases in this field.[76] This is understandable, for even in the normal case reasonable men may differ as to the probative value of evidence, and the common disaster case, where much of the evidence is technical and almost all of it circumstantial, is distinctly abnormal. Moreover, the appellate court practice of affirming judgments if possible may result in seemingly inconsistent conclusions.[77]

Thus for three reasons, because the litigant may encounter presumptions, because of the burden of proof rule and because judges may and do differ as to what evidence is sufficient to establish survivorship, it is important to know what evidence may be available and admissible tending to prove that fact.

III

EVIDENCE TENDING TO PROVE SURVIVORSHIP

A. *Direct Evidence*

As already stated, evidence of survivorship of commorientes is almost always wholly circumstantial in the sense that it consists of assertions of human beings of some fact other than the existence of the fact (here survivorship) in issue.[78] But occasionally there are cases where direct evidence is available.

In fact, the first English case involving a common disaster, as we have defined it, was decided on direct evidence. This was the famous case of *Broughton v. Randall,*[79] where a father and his son were hanged at the same time. Because witnesses testified that the son's legs kicked after his father ceased to move, the court concluded that the son survived, and awarded his widow dower in the joint estate of father and son.[80] Strangely enough, a little more than three hundred years later Surrogate Fowler likewise concluded that the kicking of a person's legs after the other commorientes were still was sufficient direct evidence to establish his survivorship.[81]

[76] For example, compare Kimmey's Estate, 326 Pa. St. 33, 191 A. 47 (1937), and Warwicker v. Toronto General Trusts Corp., [1926] 3 Dom. L. R. (Ont.) 368; Sweeney's Estate, 78 Pa. Super. 417 (1922), and Tovey v. Geiser, 150 Kan. 210, 92 P. (2d) 3 (1939).

[77] See In re Loucks' Estate, 160 Cal. 551, 117 P. 673 (1911); Sporrer v. Ady, 150 Md. 60, 132 A. 376 (1926).

[78] See 1 WIGMORE, EVIDENCE, 2d ed., § 24 (1923).

[79] Cro. Eliz. 502, 78 Eng. Rep. 752 (1596).

[80] The same case is reported in Noy 64, 74 Eng. Rep. 1032, where the reporter states that the father's legs kicked after the son ceased to move. Query, whether modern medical science would not say that the kicking of legs was only reflex action after death?

[81] In re Herrmann, 75 Misc. 599, 136 N. Y. S. 944 (1912), aff'd. sub nom. In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 743 (1913).

Usually, direct evidence will be of this general nature. A common situation is where a train strikes the automobile in which *A* and *B* are riding, and passing motorists and passengers on the train rush to the scene.[82] Then at the trial they testify that *A* was breathing or moaning or that his heart was beating, and that none of these things was true as to *B*. This, of course, is the best evidence available and generally will outweigh considerable opposing evidence which is only circumstantial.[83]

Occasionally the direct evidence is undisputed.[84] But ordinarily, it is hopelessly conflicting. And in addition to this difficulty, the attendant excitement and confusion at the scene of the disaster make it important that disinterested witnesses be used whenever possible. Otherwise counsel may encounter judicial reaction similar to that evidenced in *Graybill v. Brown*,[85] where Justice Evans said:

> "Several of these witnesses for plaintiff [asserting survivorship] were her former acquaintances and friends. It was quite natural that they should hope desperately for the best, and that their opinion or judgment might be influenced in some degree by their hopes."[86]

In a slightly different type of case, evidence that one of the commorientes was seen after the others had disappeared (as in a shipwreck), or that one was heard to cry out while the others were silent, has been admitted. Here the line between direct and circumstantial evidence is less distinct, and courts are correspondingly more skeptical of the probative value of such evidence.

Chancellor Johnston introduced the "last seen survivor" test in *Pell v. Ball*,[87] a case involving a shipwreck, where he held that the

[82] This is exactly the case in Graybill v. Brown, 194 Iowa 290, 189 N. W. 726 (1922); McComas v. Wiley, 134 Md. 572, 108 A. 196 (1919); Modern Woodmen of America v. Parido, 335 Ill. 239, 167 N. E. 52 (1929), affg. 253 Ill. App. 68 (1928); In re Herrmann, 75 Misc. 599, 136 N. Y. S. 944 (1912), affd. sub nom. In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 743 (1913); In re Louck's Estate, 160 Cal. 551, 117 P. 673 (1911).

[83] See 1 WIGMORE, EVIDENCE, 2d ed., § 26 (1923).

[84] Modern Woodmen of America v. Parido, 335 Ill. 239, 167 N. E. 52 (1929), affg. 253 Ill. App. 68 (1928); In re Gerdes' Estate, 50 Misc. 88, 100 N. Y. S. 440 (1906), affd. sub nom. In re McInnes, 119 App. Div. 440, 104 N. Y. S. 147 (1907).

[85] 194 Iowa 290 at 294, 189 N. W. 726 (1922).

[86] Compare In re Herrmann, 75 Misc. 599, 136 N. Y. S. 944 (1912), affd. sub nom. In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 742 (1913); Sporrer v. Ady, 150 Md. 60 at 70, 132 A. 376 (1926).

[87] 1 Cheves Eq. (S. C.) 99 (1840).

woman, seen just before the vessel sank, survived her husband who had not been seen for some time. Though this view is supported in *Smith v. Croom*,[88] it was disapproved in *Matter of Ridgway*[89] and has been ignored in several cases.[90]

Evidence of outcries has met similar treatment. In *Russell v. Hallett*,[91] where a family was drowned when a wagon overturned in a river, the only evidence of survivorship was testimony that only one of the family called for help. On this evidence the case went to the jury which found against survivorship. The appellate court was unwilling to disturb this finding, and this has been the view of the few courts which have considered the same question.[92]

B. *Circumstantial Evidence*

Any attempt to classify circumstantial evidence of survivorship of commorientes must necessarily be arbitrary. One method is to group together all of the cases involving the same type of disaster, and much can be said for such a grouping. But there are certain general classes of circumstantial evidence which may be available regardless of the nature of the disaster. It seems more useful, therefore, to adopt the latter classification. A miscellaneous class will conveniently care for the items otherwise unclassified.

1. *Evidence of Age and Sex*

It seems clear that evidence of differences in age and sex of commorientes should be of some importance in determining survivorship. And occasionally courts have expressly acknowledged its value. Thus in *Smith v. Croom*,[93] Justice Du Pont said:

> "it not infrequently happens that the considerations of age, sex, etc., are resorted to in connection with other circumstances as a *matter of evidence*, from which a certain conclusion [i.e., survivorship] may be legitimately inferred."[94]

[88] 7 Fla. 81 (1857). And see Warren v. Aetna Life Ins. Co., 202 Mo. App. 1, 213 S. W. 527 (1919).

[89] 4 Redf. (N. Y. Surr.) 226 at 230 (1880).

[90] Palmer v. Muir, 4 Queens. L. J. R. 46 (Aus. 1890); Schaefer v. Holmes, 277 Mass. 468, 178 N. E. 613 (1931); Hildenbrandt v. Ames, 27 Tex. Civ. App. 377, 66 S. W. 128 (1901).

[91] 23 Kan. 276 (1880).

[92] Colovos' Admr. v. Gouvas, 269 Ky. 752 at 759, 108 S. W. (2d) 820 (1937); Will of Ehle, 73 Wis. 445 at 455, 41 N. W. 627 (1889); Baldus v. Jeremias, 296 Pa. St. 313, 145 A. 820 (1929).

[93] 7 Fla. 81 at 143-144 (1857).

[94] See also Schaefer v. Holmes, 277 Mass. 468 at 470, 178 N. E. 613 (1931);

But the trouble does not come with admissibility. In fact, the admissibility of such evidence seems never to have been questioned.[95] Rather, the difficulty lies in determining its probative value. Courts seem to feel that evidence of age and sex, unsupported by other evidence, cannot sufficiently indicate survivorship.[96] And in many cases this is no doubt true. Writers on medical jurisprudence agree that there is a period, approximately between the ages of fifteen and sixty, when, other things being equal, any difference in age would be insignificant.[97] Thus where *A* and *B* are drowned, the fact that *A* is forty and *B* is forty-two would seem to indicate nothing as to the probability of survivorship of either. But where *A* was thirty-seven and *B* was eight, one judge indicated that he would "probably have no difficulty" in supposing that *A* survived.[98] While the soundness of this supposition might be questioned, the respective ages of persons outside the limits where physical development and vigor are comparatively equal may well be deemed sufficient to determine survivorship. Thus if *A* is forty and *B* is two, or if *A* is forty and B is eighty-five, other things being equal it seems reasonable to conclude, in a case of drowning, for example, that *A* survived.[99]

The sex of the persons involved presents the same problems, though here, perhaps, there is even less room for sharp distinctions. Other things being equal, it might be fair to assume that male survived female, and with this assumption medical writers concur to a limited

Sillick v. Booth, 1 Y. & C. C. C. 116 at 124-125, 62 Eng. Rep. 816 (1841); Pell v. Ball, 1 Cheves Eq. (S. C.) 99 at 103 (1840).

[95] Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903); Coye v. Leach, 8 Metc. (49 Mass.) 371 (1844); Robinson v. Gallier, 2 Woods 178, 20 F. Cas. 1006, No. 11,951 (1875); Palmer v. Muir, 4 Queens. L. J. R. 46 (Aus. 1890); Collins v. Atlantic Coast Line Ry., 183 S. C. 284, 190 S. E. 817 (1936); Sweeney's Estate, 78 Pa. Super. 417 (1922).

[96] Coye v. Leach, 8 Metc. (49 Mass.) 371 at 375 (1844); In re Herrmann, 75 Misc. 599, 136 N. Y. S. 944 (1912), affd. sub nom. In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 743 (1913).

[97] 1 PETERSON, HAINES, and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 230 (1923) (between 25 and 50); REESE, MEDICAL JURISPRUDENCE AND TOXICOLOGY, 8th ed., 55 (1913) (between 15 and 60); 2 WITTHAUS and BECKER, MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY, 2d ed., 343 (1907) (between 25 and 50); 3 WHARTON and STILLE, MEDICAL JURISPRUDENCE, 4th ed., § 723 (1884) (between 27 and 50); HEROLD, A MANUAL OF LEGAL MEDICINE 189 (1902) (between 15 and 60).

[98] Coye v. Leach, 8 Metc. (49 Mass.) 371 at 374 (1844). However, this was dictum.

[99] See 1 PETERSON, HAINES, and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 230 (1923).

extent.[100] The uncertainty of such an assumption arises from the factors which can vary it. If *A* is a woman forty-five years old and *B* a boy of three or a man of eighty-five, and both drown, it would seem that the opposite assumption is more correct.

Moreover, the cause of death in a common disaster can upset normal deductions from both age and sex. If the deaths are caused by lightning, a bomb explosion, or a fast moving train colliding with an automobile, age or sex differences of the commorientes would seem immaterial. And doctors have found that children withstand heat and thirst better than adults, that old people are less exhausted by hunger than are middle-aged persons or children, that women combat carbon monoxide gas better than men,[101] and that women are better able than men to undergo severe physical pain.[102] Distinctions also can be drawn between situations where strength is required, where men are more likely to survive, and those where passive endurance is needed, where women are more likely to survive.

The result is that the value of evidence of age and sex will vary in each case. It is apparent that it should not be excluded, even though the court may eventually conclude that it is valueless. And it might be well to recall that every statutory scheme of presumptions is based on age and sex differences.[103]

2. *Evidence of Physical Condition*

Evidence of the physical condition of commorientes prior to the disaster may be useful in many cases. Thus a writer on medical jurisprudence says:[104]

> "The state of health may outweigh the presumptive evidence given by both age and sex. An adult male invalid may reasonably

[100] REESE, MEDICAL JURISPRUDENCE AND TOXICOLOGY, 8th ed., 55 (1913); 1 PETERSON, HAINES and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 230 (1923); 2 WITTHAUS and BECKER, MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY, 2d ed., 343 (1907).

[101] See Tovey v. Geiser, 150 Kan. 210, 92 P. (2d) 3 (1939); Estate of Butt, 181 Wis. 141, 193 N. W. 988 (1923).

[102] See, generally, 2 WITTHAUS and BECKER, MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY, 2d ed., 342-349 (1907); 1 PETERSON, HAINES, and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 230-233 (1923); REESE, MEDICAL JURISPRUDENCE AND TOXICOLOGY, 8th ed., 55-57 (1913).

[103] See statutes quoted supra, note 47, and 12 TULANE L. REV. 623 (1938); Banogon, "The Legal Presumptions of Survivorship and Legal Medicine," 7 PHIL. L. J. 383 (1928); 11 IOWA L. REV. 93 (1925).

[104] Doctor Ewing in 1 PETERSON, HAINES, and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 230-231 (1923).

be expected to perish from any of the usual forms of violence before a healthy adult female or child. . . . It may, therefore, become important to study . . . the general condition of health of the persons concerned."

But here too it must be remembered that the cause of death may have a vital bearing on the value of the evidence. For example, if *A* and *B* are killed by a bomb explosion or in a collision with a train, where death to both was a matter of seconds, evidence of their respective physical conditions would seem to have little bearing on the question of which one survived.[105]

There are very few clear-cut statements in the decisions concerning the value of evidence of physical condition, for seldom is it considered apart from the other evidence introduced.[106] Perhaps the best comment is that in *Supreme Council of Royal Arcanum v. Kacer*[107] by Judge Goode, who said:

"Much evidence was introduced about the comparative health and strength of Mr. Yokum and his daughter when they started on their cruise, for the purpose of showing who was likely to survive . . .; but a rehearsal of it would be useless, for it made no impression on us as tending to prove which survived."

At an earlier date Lord Mansfield apparently thought likewise, for in *The King v. Hay*,[108] involving almost identical facts, he refused to decide the issue of survivorship of father and daughter despite evidence that the daughter was strong and healthy while her father was old and asthmatic. And other courts have refused to attach any significance

[105] See 2 WITTHAUS and BECKER, MEDICAL JURISPRUDENCE, FORENSIC MEDICINE, AND TOXICOLOGY, 2d ed., 343 (1907). But see Pollard v. Gorman, 52 Ga. App. 127, 182 S. E. 678 (1935), and Robson v. Lyford, 228 Mass. 318, 117 N. E. 621 (1917), where the commorientes met death in an automobile-train collision. In both cases the court attached some significance to evidence that one was in better physical condition than the other.

[106] Often it is merely mentioned in passing. For example: Collins v. Atlantic Coast Line Ry., 183 S. C. 284 at 290, 190 S. E. 817 (1936); Southwell v. Gray, 35 Misc. 740, 72 N. Y. S. 342 (1901); Supreme Council of Royal Arcanum v. Kacer, 96 Mo. App. 93, 69 S. W. 671 (1902). In Pollard v. Gorman, 52 Ga. App. 127 at 131, 182 S. E. 678 (1935), the court said that because *A* was in good health the jury were authorized in finding that *A* and *B* died simultaneously rather than finding that *B* survived.

[107] 96 Mo. App. 93 at 98, 69 S. W. 671 (1902).

[108] 1 Wm. Black. 640, 96 Eng. Rep. 372 (1767). The evidence offered or argued is stated in 2 WITTHAUS and BECKER, MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY, 2d ed., 344 (1907). And see Smith v. Croom, 7 Fla. 81 at 146 (1857).

to such evidence in cases involving similar fact situations.[109] But in at least one drowning case evidence of superior physical condition has been sufficient to find survivorship.[110]

One valuable use of such evidence has been in cases where death was due to asphyxiation by gas fumes. It has been noted previously that women withstand carbon monoxide (the customary case) better than men. In addition to this is the fact that diseases, particularly of the blood, have a material bearing on ability to withstand its effect. Thus in *Tovey v. Geiser*,[111] the court attached controlling weight to medical testimony that one of two commorientes suffered from syphilis, which reduced the number of red corpuscles in his blood and thus the amount of gas-free oxygen which his blood could carry. And Presiding Judge Miller in *Cordes' Estate*[112] thought that evidence that a woman suffered from bronchitis and an enlarged heart was sufficient to establish that her husband withstood longer the fumes of a room heater.[113]

But some judges are not loath to disagree with the medical profession on this point. In *In re Englebirt's Estate*[114] Judge Thomas said:

> "the argument continues that, as the red corpuscles were greatly reduced by the husband's disease, there were less of them to carry the oxygen than in the wife, who was in robust health. . . . Although Dr. Hart so testified, the conclusion to the lay mind seems a *non sequitur*. If there are less conveying red corpuscles in a diseased than in a sound body, they are less to carry either oxygen or monoxide."

This same general reluctance to accept such evidence pervades many opinions.[115]

[109] Supreme Council of Royal Arcanum v. Kacer, 96 Mo. App. 93, 69 S. W. 671 (1902); United States Casualty Co. v. Kacer, 169 Mo. 301, 69 S. W. 370 (1902); Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903); Wing v. Angrave, 8 H. L. C. 183, 11 Eng. Rep. 397 (1860); Taylor v. Diplock, 2 Phill. Ecc. 261, 161 Eng. Rep. 1137 (1815).

[110] Sillick v. Booth, 1 Y. & C. C. C. 116 at 124, 62 Eng. Rep. 816 (1841).

[111] 150 Kan. 210, 92 P. (2d) 3 (1939), one of the best presented of the recent cases.

[112] 3 Pa. Dist. & Co. 551 (1923). See Hornberger's Estate, 19 Berks Co. (Pa.) 104 (1926), and Deyo v. Grosfeld, 163 Misc. 27, 294 N. Y. S. 1010 (1936), where such evidence, if available, might have altered the result.

[113] Query: would the court have held that she survived her husband on the strength of the authorities cited in notes 101, 102, supra, if there had been no evidence of her diseased condition?

[114] 184 App. Div. 314 at 315, 171 N. Y. S. 788 (1918).

[115] For example: Sweeney's Estate, 78 Pa. Super. 417 (1922); In re Burza's Estate, 151 Misc. 577, 272 N. Y. S. 248 (1934). But see Estate of Butt, 181 Wis. 141, 183 N. W. 988 (1923).

It would be useless to single out other specific cases for comment, but one other item of evidence, not exactly of physical condition but related to it, deserves mention. Several courts have considered, in cases involving death by drowning, evidence that one or more of the commorientes could swim although the others could not. While it is true that this should not be conclusive, it would seem, other things being equal, that the fact that one could swim reasonably indicates that he survived the others.[116] Most courts, however, attach little or no weight to such evidence.[117]

3. *Evidence of the Position of Commorientes' Bodies*

Evidence of the position of commorientes' bodies often is extremely useful, and in several cases has been considered sufficient to establish survivorship. Roughly it may be separated into two classes: evidence of position before or at the moment of the disaster; and, evidence of position after the disaster. While in some cases, notably the asphyxiation by gas cases, the position is probably the same before and after the disaster, it is considered under the latter heading since ordinarily only the position after death is known with certainty.

(a) *Before the Disaster*

The most striking use of this evidence is in the cases involving automobile-train collisions. Here it is usually offered to show that *A* was driving, that *B* was sitting beside *A*, that the train struck *B's* side of the car first, and that therefore *B* must have been killed first. At once it is plain that many things can vary the value of such evidence, and this apparently causes many courts to distrust it. For example, in *Estate of Wallace*[118] Presiding Judge Finlayson said:

> "The fact that Mrs. McAllen was seen seated on the left side of the automobile an instant before it was crashed into by the onrushing train . . . is entirely consistent with the theory that Mrs. Wallace was struck and her neck broken before [Mrs. McAllen's] spinal cord was severed or before the latter received any instantaneously fatal injury. It is quite possible that the engine . . .

[116] See Schaefer v. Holmes, 277 Mass. 468, 178 N. E. 613 (1931); STEWART, LEGAL MEDICINE 227-228 (1910); 1 PETERSON, HAINES, and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 231 (1923); REESE, MEDICAL JURISPRUDENCE AND TOXICOLOGY, 8th ed., 56 (1913). That the swimmer was drowned during a menstrual period or suffered from some weakening disease may be significant.

[117] For example: Young Women's Christian Home v. French, 187 U. S. 401, 23 S. Ct. 184 (1903); Succession of Langles, 105 La. 39, 29 So. 739 (1900); Fuller v. Linzee, 135 Mass. 468 (1883).

[118] 64 Cal. App. 107 at 113-114, 220 P. 682 (1923).

> may have violently projected some part of the broken framework of the small vehicle against Mrs. Wallace's neck, breaking it instantly and even before [Mrs. McAllen] was actually hit. . . ."[119]

Absent other evidence, this distrust seems justified, and Presiding Judge Jenkins, in *Pollard v. Gorman*,[120] stated the view of the great majority of courts when he said:

> "in the absence of any evidence as to the nature of their wounds, the jury were not compelled to find that the mother died first, even though she sat on the side of the car where the locomotive first struck. . . ."[121]

But in common disaster cases involving shipwrecks, evidence of the position of the commorientes before death is given more weight. In these cases the evidence usually is to the effect that one of them was in a more dangerous spot, or in a place where he could not extricate himself.

Illustrative of the first situation is *Smith v. Croom*[122] where the fact that Mr. Croom was standing on a deck swept by a large wave materially aided the court in concluding that he perished before his son and daughter. And in *Pell v. Ball*[123] the court seems to have gone farther, for it attached considerable significance to the probability that Mr. Ball, killed with his wife when the Pulaski sank, was nearer to the boiler explosion than she was.

Schaefer v. Holmes[124] was concerned with the second suggested situation. In that case *A*, *B*, and *C* were drowned when their boat capsized, and evidence that *C* was in the cabin when the boat turned over was sufficient to establish that she died before *A* who was seen struggling in the water afterwards. And in *Warren v. Aetna Life Ins. Co.*,[125] where the facts were identical, Judge Becker pointedly remarked:

[119] In this case the trial judge thought evidence that Mrs. McAllen was nearer to the impact was sufficient to warrant finding that she died first.

[120] 52 Ga. App. 127 at 131, 182 S. E. 678 (1935).

[121] In most cases the point is ignored or given no weight. See Masonic Temple Assn. v. Hannum, 120 N. J. Eq. 183, 184 A. 414 (1936); Collins v. Atlantic Coast Line Ry., 183 S. C. 284, 190 S. E. 817 (1936); Sovereign Camp v. McKinnon, (D. C. Ga. 1931) 48 F. (2d) 383. But see Robson v. Lyford, 228 Mass. 318, 117 N. E. 621 (1917), where this evidence, with evidence of injuries, was sufficient to find survivorship of one of the commorientes.

[122] 7 Fla. 81 (1857). See Redfearn, "Presumption as to Order of Death in a Common Calamity," 9 FLA. L. J. 405 (1935).

[123] 1 Cheves Eq. (S. C.) 99 (1840).

[124] 277 Mass. 468, 178 N. E. 613 (1931).

[125] 202 Mo. App. 1 at 15, 213 S. W. 527 (1919).

"It would . . . be lame justice indeed which would attempt to side step . . . deciding that [*A*] had survived [*C*]. . . ."

(b) *After the Disaster*

Evidence of the position of commorientes' bodies after the disaster is more generally used, due in large part to the fact that ordinarily the only witnesses available are those who came upon the scene after the disaster occurred.

Certainly the most common use of such evidence, as previously suggested, is in the cases where death is caused by asphyxiation by gas. It is particularly valuable in these cases because distances from the source of the fumes and sources of fresh air materially affect the time required for gas to produce death.[126] Yet despite general agreement to this effect among medical authorities, most courts attach little significance to evidence, in a case where *A* and *B* were asphyxiated by fumes from a room heater for example, that *A* was found close to the heater while *B* was found on the other side of the room.[127]

In part this result is due, no doubt, to other evidence in the case suggesting that *A*, originally as far away as *B*, might have moved closer to the heater after realizing the presence of gas fumes.[128] It seems likely, too, that where *B* was only slightly farther away from the heater than *A*, a court will be less impressed by such evidence than if the difference were considerable.[129] But it still is a little surprising to note that apparently only one court has held such evidence sufficient to establish that *B* survived *A*.[130]

Perhaps less frequently, evidence of position of commorientes' bodies is introduced in cases involving automobile-train collisions. Probably in most of these cases such evidence comes in merely to

[126] 2 WITTHAUS and BECKER, MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY, 2d ed., 346 (1907); STEWART, LEGAL MEDICINE 227 (1910); 1 PETERSON, HAINES, and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 231 (1923).

[127] Southwell v. Gray, 35 Misc. 740, 72 N. Y. S. 342 (1901); Sweeney's Estate, 78 Pa. Super. 417 (1922); Re Coupe, 147 L. T. 168 (1919). In some cases the point is ignored: Hornberger's Estate, 19 Berks Co. (Pa.) 104 (1926); Deyo v. Grosfeld, 163 Misc. 27, 294 N. Y. S. 1010 (1936); In re Burza's Estate, 151 Misc. 577, 272 N. Y. S. 248 (1934).

[128] In re Englebirt's Will, 184 App. Div. 314, 171 N. Y. S. 788 (1918). In Cordes's Estate, 3 Pa. Dist. & Co. 551 (1923), evidence to this effect was outweighed by evidence that *A's* physical condition was superior to *B's*.

[129] See Abrams v. Unknown Heirs of Rice, 317 Mo. 216, 295 S. W. 83 (1927).

[130] In re Hayward's Estate, 143 Misc. 401, 256 N. Y. S. 607 (1932). And see Tovey v. Geiser, 150 Kan. 210, 92 P. (2d) 3 (1939); Estate of Butt, 181 Wis. 141, 193 N. W. 988 (1923).

complete the picture of how the disaster occurred. Occasionally, however, it assumes real significance.

In *Vaegemast v. Hess*[181] the coupe in which *A* and *B* were riding was struck by a train. The evidence indicated that *A's* body was found near the point of impact and that he had suffered injuries sufficient to cause virtually instant death. On the other hand, it appeared that *B's* body was found scattered along the rails beginning at a point one hundred thirty-two feet from the crossing where car and train had met. This evidence, coupled with evidence that *B's* injuries probably were not received until she struck the rails and probably would not cause instant death, was held sufficient to justify a finding that she survived *A* by an "appreciable time."[182]

In *Robson v. Lyford*[183] the facts were almost identical. There, too, *A's* body was found nearer the point of impact, and his injuries likely produced immediate death. But the position of *B's* body indicated that she had struck her head on some object after she was pitched from the automobile, and this indication was corroborated by the fact that she lay on the ground with her head pointing away from the tracks with the contents of her skull about eighteen inches farther away. This evidence combined with the evidence of *A's* and *B's* injuries to sustain a finding that *B* survived.[184]

Still other cases present situations where evidence of the position of the bodies is helpful. In several cases *A* and *B* have been killed by an unknown assailant, or *A* has shot *B* and then killed himself. In the first situation the position of *A's* body may indicate that he was attacked first by the assailant,[185] and in either situation the positions of *A's* and *B's* bodies may suggest that one struggled after being wounded although the other did not.[186] In several other cases, *A* and *B* have been drowned

[181] 203 Minn. 207, 280 N. W. 641 (1938).

[182] See also In re Herrmann, 75 Misc. 599, 136 N. Y. S. 944 (1912), affd. sub nom. In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 743 (1913). Cf. Re McCabe Estates, 69 Dom. L. R. (Sask.) 730 (1922), where a cyclone carried *A* a short distance but carried *B* about 90 yards.

[183] 228 Mass. 318, 117 N. E. 621 (1917).

[184] Compare McComas v. Wiley, 134 Md. 572, 108 A. 196 (1919), where direct evidence to the contrary outweighed evidence similar to that in Robson v. Lyford, 228 Mass. 318, 117 N. E. 621 (1917).

[185] Evans v. Halterman, 31 Ohio App. 175, 165 N. E. 869 (1928). See also Hollister v. Cordero, 76 Cal. 649, 18 P. 855 (1888), where the court reached a contrary conclusion. The latter court recognized that because *A* was attacked first did not mean that *A* died first.

[186] Union Central Life Ins. Co. v. Elizabeth Trust Co., 119 N. J. Eq. 505, 183 A. 181 (1936); Broome v. Duncan, (Miss. 1901) 29 So. 394.

when the auto in which they were riding left the road and overturned in the adjoining water. Here evidence that *B's* position is the same as when the car left the road though *A's* is changed may intimate that *B* died instantly but that *A* struggled to escape from the submerged car.[137]

Estate of Ehle[138] best illustrates how important such evidence may be. There *A*, *B*, and *C*, and the children of *B* and *C* died in a fire which razed the house in which they were sleeping. The evidence showed that the fire started in the northwest corner of the house and burned throughout the house in a southeasterly direction. It also showed that *A* was in the northwest room, that *B* was in a middle room, that *C* and the children were in the southeast room, and that their bodies were found in the ruins in places corresponding to the locations of the respective rooms. On the strength of this evidence the court held that *A* died first, *B* died second, and *C* and the children died last.

4. *Evidence of the Condition of Commorientes' Bodies after the Disaster*

In many respects, evidence of the condition of commorientes' bodies after the disaster is the most valuable which can be offered. More specifically, the writers refer to evidence, for example, of wounds, peculiar injuries, or appearance of the bodies. Regarding evidence of this nature, two preliminary observations are necessary. In the first place, most of this evidence must come from experts, and since doctors normally are called shortly after the disaster occurs, attorneys should make particular effort to secure them as witnesses, especially those who first reached the scene. In the second place, it should be noted that the value of much of this evidence will vary inversely with the amount of time elapsing between the disaster and examination of the bodies. Again it is convenient to divide the discussion into two parts: evidence of effects produced by the disaster; and evidence of cadaveric changes or effects resulting simply from death.

(a) *Effects of the Disaster*

Any attempt to make a complete study of this type of evidence would be pointless, but it is illuminating to examine a few of the items of evidence which are offered and judicial reactions to them. The most common case, of course, is one where the injuries of the

[137] Kimmey's Estate, 326 Pa. St. 33, 191 A. 47 (1937); Warwicker v. Toronto General Trusts Corp., [1936] 3 Dom. L. R. (Ont.) 368. See also Miller v. McCarthy, 198 Minn. 497, 270 N. W. 559 (1936).

[138] 73 Wis. 445, 41 N. W. 627 (1889).

commorientes are depicted generally by a doctor, and the jury or court is asked to infer that though *B* lived for a short time, *A* died instantly.

An excellent illustration of the nature and value of this type of evidence is *Vaegemast v. Hess*,[139] a case where *A* and *B* were killed when their automobile was struck by a train. Doctors testified that *A* had suffered a complete dislocation of articulation between atlas bone and skull, that the spinal cord was completely severed at this point, and that death would have occurred within a few seconds. They also testified that *B's* legs had been severed, that her skull had been crushed, that she had been partially eviscerated, but that instant death was less likely than in *A's* case. On this evidence, and evidence that *B's* injuries probably were not received until she struck the tracks a hundred odd feet from the point of impact, the court sustained a finding that *B* survived *A*.[140]

In many cases, although there is evidence that *A's* injuries would produce instant death while *B's* probably would not, the courts are hesitant to find that *B* survived because of uncertainty as to the time when the respective injuries were received.[141] This is especially true in the automobile-train collision cases and in the murder cases.[142] In fact, it was this uncertainty in *Campbell v. Cox & Mitchell*[143] where *A* shot his wife and then committed suicide, which prompted Judge MacDonald to query:

> "assuming that I give most favorable construction . . . to the evidence of the doctors, as to the time during which the wife may have lived, still how can I decide that the husband, immediately after he had inflicted what would prove a death wound to his wife, committed suicide?"

Most of the evidence is of this general nature and is complicated both by the time factor noted above and by frequent disagreement among experts as to just what the effect of the injuries would be. In

[139] 203 Minn. 207, 280 N. W. 641 (1938).

[140] Compare Robson v. Lyford, 228 Mass. 318, 117 N. E. 621 (1917), and Estate of Wallace, 64 Cal. App. 107, 220 P. 682 (1923).

[141] This has been suggested in some of the asphyxiation cases too. See Abrams v. Unknown Heirs of Rice, 317 Mo. 216, 295 S. W. 83 (1927); In re Hayward's Estate, 143 Misc. 401, 256 N. Y. S. 607 (1932).

[142] Estate of Wallace, 64 Cal. App. 107, 220 P. 682 (1923) (auto-train collision); Hollister v. Cordero, 76 Cal. 649, 18 P. 855 (1888) (murder); Bierbrauer v. Moran, 244 App. Div. 87, 279 N. Y. S. 176 (1935) (murder). But see Evans v. Halterman, 31 Ohio App. 175, 165 N. E. 869 (1928).

[143] [1930] 1 Dom. L. R. (Brit. Col.) 649 at 650. See also Re McCabe Estates, 69 Dom. L. R. (Sask.) 730 (1922).

some cases, however, evidence of particular injuries has merited special consideration. Thus courts quite generally agree that a broken neck, especially if it results in severance of the spinal cord, will produce death within a few seconds.[144] And they are often impressed by deep or severe head wounds.[145]

Evidence that circulation continued in *B* for a short time after receipt of the wounds ultimately causing death is extremely effective, especially if *A* probably died instantly. Thus in *Vaegemast v. Hess*[146] it was shown that *B's* heart was empty of blood, that her severed leg contained much more blood than the rest of her body, and that a blood clot had been carried to her superior bronchi. And in *Noller v. Aetna Life Ins. Co.*[147] doctors testified that after *B* was wounded she bled for a short time, that blebs were found in her mouth which were caused by breathing through blood which had begun to coagulate, and that blood did not begin to coagulate for three or four minutes after it starting flowing.[148] In both cases, *A's* death was virtually instantaneous, and both courts sustained a finding that *B* survived. Conversely, it has been held that evidence that one of the commorientes did not bleed until his body was moved indicated that his heart stopped beating instantly.[149]

Occasionally, in asphyxiation by gas cases, evidence has been introduced that carbon monoxide produces a pinkish tint in the inhalant's skin. It is argued that as more gas is inhaled the skin becomes pinker, and that therefore the one with the pinkest skin died first. Medical writers apparently offer little support for this proposition, and courts consider it an unreliable indication of survivorship.[150]

[144] For example: Estate of Wallace, 64 Cal. App. 107, 220 P. 682 (1923); Vaegemast v. Hess, 203 Minn. 207, 280 N. W. 641 (1938); McComas v. Wiley, 134 Md. 572, 108 A. 196 (1919).

[145] For example: In re Herrmann, 75 Misc. 99, 136 N. Y. S. 944 (1912), affd. sub nom. In re Laffargue's Estate, 155 App. Div. 923, 140 N. Y. S. 743 (1913); Warwicker v. Toronto General Trusts Corp., [1936] 3 Dom. L. R. (Ont.) 368. And see Nolf v. Patton, 114 S. C. 323, 103 S. E. 528 (1920), where the court seems to have overlooked completely the time factor.

[146] 203 Minn. 207, 280 N. W. 641 (1938).

[147] 142 Kan. 35, 46 P. (2d) 22 (1935).

[148] On the strength of this evidence and evidence that *A* died instantly, the court sustained a finding that *B* survived. Compare Grand Lodge A. O. U. W. v. Miller, 8 Cal. App. 25, 96 P. 22 (1908), where somewhat similar evidence was introduced but was given no weight.

[149] Evans v. Halterman, 31 Ohio App. 175, 165 N. E. 869 (1928). See generally, 1 PETERSON, HAINES, and WEBSTER, LEGAL MEDICINE AND TOXICOLOGY, 2d ed., 178 (1923). And see In re Marttinen, 171 Minn. 475, 214 N. W. 469 (1927).

[150] Sweeney's Estate, 30 Pa. Dist. 464 (1921); Sweeney's Estate, 78 Pa. Super.

Apparently unreliable, too, is evidence in drowning cases that one of the commorientes had more water in his lungs, for courts attach little significance to it.[151] However, one court utilized it with other evidence to find that the one whose lungs contained more water survived on the theory that he breathed after he was submerged.[152]

(b) *Cadaveric Changes*

Evidence of cadaveric or post mortem changes likewise may be of great value. The degree to which rigor mortis[153] and decomposition have progressed may tend to indicate which of the victims died first. Eye balls dilate and are tense for about an hour after death and then contract and lose their tension.[154] Moisture under the eyelids is alkalinic in reaction immediately after death, gradually changes to acidic, and in advanced putrefaction again becomes alkalinic. Cadaveric discoloration (which should be distinguished from the discoloration due to gas) and flaccidity of the skin may indicate roughly the length of time since death.[155] The same is true to some degree of evidence of the extent to which the contents of the stomach have been digested.[156]

Yet somewhat strangely, in only one case has there been a serious attempt to establish survivorship by such evidence, and that one failed.[157] Two things no doubt will explain this in part. In the first place, many other factors affect the reliability of this evidence, such as age, sex, health, presence or absence of fatty tissue, place where the bodies are found, temperature, amount of fresh air, etc. Moreover, in some cases the bodies will be found too late after the disaster to make possible nice distinctions as to the time of death. But this will not explain the absence of such evidence in all cases. It would seem that

417 (1922); In re Hels, 278 Ill. App. 185 (1934). See also DE LOS ANGELES, LEGAL MEDICINE 350-353, 376-377 (1934). Relative color of the bodies is sometimes urged in asphyxiation from drowning cases but seems to be similarly treated. Kimmey's Estate, 27 Pa. Dist. & Co. 608 (1936).

[151] Kimmey's Estate, 326 Pa. St. 33, 191 A. 47 (1937); Miller v. McCarthy, 198 Minn. 497, 270 N. W. 559 (1936).

[152] Warwicker v. Toronto General Trusts Corp., [1936] 3 Dom. L. R. (Ont.) 368.

[153] See In re Hayward's Estate, 143 Misc. 401, 256 N. Y. S. 607 (1932); Hornberger's Estate, 19 Berks Co. (Pa.) 104 (1926); Warwicker v. Toronto General Trusts Corp., [1936] 3 Dom. L. R. (Ont.) 368.

[154] See Bennett v. Peattie, 57 Ont. L. R. 233 (1925).

[155] But see In re Hels, 278 Ill. App. 185 (1934).

[156] In general on post mortem changes, see GUY, FORENSIC MEDICINE, 3d ed., 233-246 (1868); HERZOG, MEDICAL JURISPRUDENCE 18-39 (1931); DE LOS ANGELES, LEGAL MEDICINE 64-94 (1934).

[157] In re Hels, 278 Ill. App. 185 (1934).

in every case effort should be made to secure evidence of this nature, especially the comparative findings if autopsies were performed.

Evidence of the relative temperatures of commorientes' bodies is frequently introduced, however, and there has been much judicial comment concerning it. Many consider it too uncertain to be of any value.[158] And if such evidence stands alone there is much justification for this view. Yet several courts have attached considerable weight to it,[159] and in two cases evidence that *A's* body was warmer than *B's* has been almost the sole basis for finding that *A* survived.[160]

5. *Miscellaneous Circumstantial Evidence*

Many other odds and ends of circumstantial evidence might be mentioned which tend in some way or other to indicate survivorship of some of the commorientes. But lack of space limits the discussion to a few suggestions.

In every case the attorneys should be alive to all possible sources of evidence. Technical evidence as to the properties and movements of gas may contribute much toward a finding of survivorship.[161] Evidence of the direction of the wind may be significant in determining the order of death of commorientes killed by gas or fire.[162] Evidence of habits of one of the commorientes has been material in tending to place him nearer the brunt of the disaster.[163] A peaceful smile may indicate instant death.[164] Or a live parrot in a gas-filled house may suggest that less gas filtered into the room which it occupied.[165]

C. *Opinion Evidence*

Thus far no mention has been made of opinion evidence of experts as tending to establish survivorship, yet its importance should not be

[158] In re Burza's Estate, 151 Misc. 577, 272 N. Y. S. 248 (1934); Sweeney's Estate, 78 Pa. Super. 417 (1922); Hornberger's Estate, 19 Berks Co. (Pa.) 104 (1926); In re Englebirt's Will, 184 App. Div. 134, 171 N. Y. S. 788 (1918); In re Hels, 278 Ill. App. 185 (1934).

[159] In re Hayward's Estate, 143 Misc. 401, 256 N. Y. S. 607 (1932); Bennett v. Peattie, 57 Ont. L. R. 233 (1925).

[160] Clarke v. Bryson, 136 Cal. App. 521, 29 P. (2d) 275 (1934); Broome v. Duncan, (Miss. 1901) 29 So. 394.

[161] Tovey v. Geiser, 150 Kan. 210, 92 P. (2d) 3 (1939); Estate of Butt, 181 Wis. 141, 193 N. W. 988 (1923).

[162] Estate of Ehle, 73 Wis. 445, 41 N. W. 627 (1889) (fire); Tovey v. Geiser, 150 Kan. 210, 92 P. (2d) 3 (1939) (gas).

[163] Estate of Ehle, 73 Wis. 445, 41 N. W. 627 (1889); Warren v. Aetna Life Ins. Co., 202 Mo. App. 1, 213 S. W. 527 (1919).

[164] Union Central Life Ins. Co. v. Elizabeth Trust Co., 119 N. J. Eq. 505, 183 A. 181 (1936).

[165] Sweeney's Estate, 78 Pa. Super. 417 (1922).

overlooked. For in many cases, particularly those where the commorientes were asphyxiated by gas or where evidence of the nature of their injuries is available, opinion evidence can perform a valuable service. It should be distinguished, however, from expert evidence, although the distinction is not drawn to exclude one or the other.[166] Moreover, the problem of admissibility should be distinguished from that of the probative value of such evidence.

The situations where witnesses have expressed an opinion that one or more of the commorientes survived the others are many and varied. There is no doubt, however, that the great majority of courts admit such evidence.[167] In fact its admissibility is seldom challenged, and usually the controversy concerns the weight which should be attached to it. Thus in *Tovey v. Geiser*,[168] where *A* and *B* were asphyxiated by fumes from a heater and where both the admissibility and the probative value of such evidence were challenged, Chief Justice Dawson answered:

> "No reason can be suggested why the opinions of competent experts should be excluded in such a case [i.e., a common disaster] when it is the best that can be had, and where direct and positive evidence does not exist."

Nor can any valid objection be made to expert opinion evidence as long as it concerns matters upon which it is possible to form an opinion.[169] Yet there are two clear holdings[170] that opinion evidence is inadmissible in common disaster cases, and other decisions suggest that it is admissible only under certain circumstances.[171]

One last point requires comment. It appears that evidence of experts' experiments may be useful, and there is little doubt about its admissibility under some circumstances.[172] In the interesting case of *Peckham*

[166] See 1 WIGMORE, EVIDENCE, 2d ed., §§ 555-558 (1923).

[167] For example: In re Marttinen, 171 Minn. 475, 214 N. W. 469 (1927); Vaegemast v. Hess, 203 Minn. 207, 280 N. W. 641 (1938); Union Central Life Ins. Co. v. Elizabeth Trust Co., 119 N. J. Eq. 505, 183 A. 181 (1936); Noller v. Aetna Life Ins. Co., 142 Kan. 35, 46 P. (2d) 3 (1935).

[168] 150 Kan. 210, 92 P. (2d) 3 at 7 (1939).

[169] This last objection has been urged in Southwell v. Gray, 35 Misc. 740, 72 N. Y. S. 342 (1901); In re Englebirt's Will, 184 App. Div. 314, 171 N. Y. S. 788 (1918).

[170] Hollister v. Cordero, 76 Cal. 649, 18 P. 855 (1888); Peckham v. Peckham, Second Judicial District, Washoe County, Nevada. The last case is unreported and the writers are indebted to E. H. Beemer, County Clerk, for a transcript of the case, decided Aug. 31, 1939.

[171] See In re Burza's Estate, 151 Misc. 577, 272 N. Y. S. 248 (1934).

[172] See 22 C. J. 755-759 (1920).

v. Peckham,[173] where a man and woman were asphyxiated in their car, evidence was admitted of experiments with male and female guinea pigs under allegedly similar conditions showing that the male had perished first. This convinced the trial judge that the woman had survived, but upon motion before a different judge a new trial was granted and Judge McKnight tersely remarked:

> "No court should undertake to determine survivorship of human beings on experiments with dumb animals."

To date this is the only known common disaster case where any attempt has been made to use such evidence, but it would seem that at least some experiments may be valuable if the conditions of the disaster are carefully simulated.[174]

CONCLUSIONS

The question is now pertinent—what of all this? For by now it must seem that proof of survivorship is a trying task. And so it is. But as long as courts refuse to adopt presumptions of survivorship the task is unavoidable. The only course open is to search for every item of evidence indicating that there was a survivor or survivors among the commorientes, and the writers have suggested both places to search and how courts may be expected to react to the evidence offered.

Unfortunately, courts sometimes overlook the fact that while very few of these items of evidence standing alone seem enough to establish survivorship, many of them taken together may be entirely sufficient. This is merely the difficulty inherent in every use of circumstantial evidence and one which cannot be avoided. Probably the best solution is for the trial judge to receive all evidence offered which in any way might tend to show survivorship, reserving the right to take the case from the jury if in the end he concludes that the evidence as a whole is insufficient to prove that there was a survivor.

At best, proof of survivorship is an unsatisfactory solution to these common disaster cases. The real objection lies behind the problem of proof. To allow title to property or insurance proceeds to depend on a survivorship of seconds, even if that survivorship is conclusively established, frequently produces unjust results and defeats the insured's, intestate's, or testator's probable intent.

The best solution, of course, is to provide for the contingency in

[173] See note 170, supra.

[174] In Peckham v. Peckham, supra note 170, the conditions of the disaster were not accurately reproduced and the case could have been properly decided the same way on that ground alone.

insurance policies, wills, and trust instruments,[175] and this will take care of almost all common disaster cases. Yet this is not often done for the simple reason, no doubt, that most people consider a common disaster quite an unlikely occurrence.[176]

Several states have created statutory presumptions to decide all common disaster cases.[177] Yet these artificial presumptions usually produce results no more satisfactory than leaving the case to be decided by proof of survivorship. They serve only to facilitate decision.[178]

The best substitute for specific provision for the contingency in insurance policy, trust instrument, or will, and one which will cover virtually all situations including those where settlor, insured, or testator has failed to anticipate the event, is a statute providing for the disposition of insurance proceeds, property of testator or intestate, or interests in trusts as a rule of property. Such a statute should be drawn without mention of presumption, common disaster, or any similar term. Nor should it afford an opportunity to establish survivorship by proof, however conclusive. Rather, it should provide simply that if testator and legatee, or insured and beneficiary, etc., die within (say) thirty days of each other, the legacy, insurance proceeds, etc., shall be distributed to certain named persons or classes of persons.[179]

[175] The draftsman should not mention "common disaster" or "presumptions." It is better to provide, for example: "If my wife [or beneficiary, etc.] die within [say] 30 days of my death, then the property shall go to . . . etc." This form and its theory were advocated by Professor Lewis M. Simes in his lectures on "Problems in Will Drafting," delivered at the University of Michigan Law Institute, June 22-24, 1939.

[176] There are only four reported cases where this has been attempted. They are Modern Woodmen of America v. Parido, 335 Ill. 239, 167 N. E. 52 (1929), affg. 253 Ill. App. 68 (1928); Matter of Fowles, 222 N. Y. 222, 118 N. E. 611 (1918); and Wilkes' Estate, 25 Pa. Dist. & Co. 228 (1935); Wilkes' Estate, 25 Pa. Dist. & Co. 343 (1936).

[177] See the references in note 47, supra.

[178] Two other solutions advanced occasionally would decide a limited number of cases. Thus it is argued that time is infinitely divisible and that deaths cannot be simultaneous. This would decide such logical dilemmas as the one in Wing v. Angrave, 8 H. L. C. 183, 11 Eng. Rep. 397 (1860) (see notes 59-61, supra), yet the court in that case refused the argument. So also, it is sometimes held that a murderer cannot inherit his victim's property. See Union Central Life Ins. Co. v. Elizabeth Trust Co., 119 N. J. Eq. 505, 183 A. 191 (1936). This makes determination of survivorship unnecessary but overlooks the fact that the heirs are not the wrongdoers.

[179] Ohio has a statute drafted partly along these lines. Ohio Gen. Code Ann. (Page, 1938), § 10503-18. Its phraseology perilously approximates a presumption, but it was held constitutional in Ostrander v. Preece, 129 Ohio St. 625, 196 N. E. 670 (1935), appeal dismissed 296 U. S. 543, 56 S. Ct. 151 (1935). Many provinces of Canada have statutes for the disposition of insurance proceeds, but they are all presumption type statutes. See 16 CAN. B. REV. 43 (1938); WIGMORE, EVIDENCE (Supplement, 1934), § 2532.

Who these persons shall be is, of course, the crucial question. In selecting them the legislature of the particular state should be governed by the same policy factors which govern it in enacting general statutes for the descent and distribution of intestate property and lapsed legacies. For example, if the state descent and distribution statutes prefer brothers and sisters to parents of the decedent, and allow representation of the brothers and sisters, the suggested statute should make similar preferences. And if the state has lapse statutes which prefer the legatee's heirs to heirs of the testator, the suggested statute should contain similar provisions.

The writers admit that this suggestion overlooks many details.[180] But they are minor details and beyond the scope of this article. The principal point is that this is the only way to avoid the too frequently unsatisfactory results of using momentary survivorship, whether established by presumption or proof, to determine the ultimate ownership and enjoyment of property of persons killed in a common disaster.

[180] Such as: estates in joint tenancy or by the entireties; inheritance taxes; substitutional gifts; the proper length of time between deaths; joinder problems in tort suits; etc. See the elaborate statutes suggested in WIGMORE, EVIDENCE (Supplement, 1934), § 2532a, and in 46 HANDBOOK OF NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS 228 (1936), which are somewhat dissimilar to the statute suggested here and to the Ohio statute cited in note 179, supra, and which apply only if survivorship cannot be determined.

APPENDIX

The following is a list of all the cases found on the subject, classified by jurisdiction.

Alabama: Vaughan v. Borland, 234 Ala. 414, 175 So. 367, 111 A. L. R. 1370 (1937).

Arkansas: Watkins v. Home Life & Acc. Ins. Co., 137 Ark. 207, 208 S. W. 587, 5 A. L. R. 791 at 797 (1919).

California: Sanders v. Simcich, 65 Cal. 50, 2 P. 741 (1884); Hollister v. Cordero, 76 Cal. 649, 18 P. 855 (1888); Grand Lodge A. O. U. W. v. Miller, 8 Cal. App. 25, 96 P. 22 (1908); In re Loucks' Estate, 160 Cal. 551, 117 P. 673 (1911), noted 44 NAT. CORP. REV. 449 (1912); Estate of Wallace, 64 Cal. App. 107, 220 P. 682 (1923); Clarke v. Bryson, 136 Cal. App. 521, 29 P. (2d) 275 (1934), noted 10 NOTRE DAME LAWY. 464 (1935); Carmody v. Powell, 32 Cal. App. (2d) 56, 89 P. (2d) 158 (1939).

Colorado: Kansas Pac. Ry. v. Miller, 2 Colo. 442 (1874).

Florida: Smith v. Croom, 7 Fla. 81 (1857), discussed by Redfearn, "Presumption as to Order of Death in a Common Calamity," 9 FLA. L. J. 405 (1935).

Georgia: Pollard v. Gorman, 52 Ga. App. 127, 182 S. E. 678 (1935); Roberts v. Hardin, 179 Ga. 114, 175 S. E. 362 (1934).

Illinois: In re Hall, 12 CHI. LEG. NEWS 68, 9 CENT. L. J. 381 (1879), a decision of the probate court for Cook county; Balder v. Middeke, 92 Ill. App. 227 (1900), affd. Middeke v. Balder, 98 Ill. App. 525 (1901), affd. 198 Ill. 590, 64 N. E. 1002, 59 L. R. A. 653 (1902); Wall v. Pfanschmidt, 265 Ill. 180, 106

N. E. 785 (1914); Modern Woodmen of America v. Parido, 335 Ill. 239, 167 N. E. 52 (1929), affg. 253 Ill. App. 68 (1928); In re Hels' Estate, 278 Ill. App. 185 (1934).

Indiana: McKinney v. Depoy, 213 Ind. 361, 12 N. E. (2d) 250 (1938), noted 13 IND. L. J. 588 (1938).

Iowa: Carpenter v. Severin, 201 Iowa 969, 204 N. W. 448, 43 A. L. R. 1340 at 1348 (1925), noted 11 IOWA L. REV. 93 (1925); Graybill v. Brown, 194 Iowa 290, 189 N. W. 726 (1922).

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