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Bernhard Grossfeld

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GLOBAL VALUATION: GEOGRAPHY AND SEMIOTICS

*Bernhard Grossfeld**

“The greatest thing by far is to be a master of metaphor”
(Aristotle)

Oh give me lands,
Lots of land under starry skies above,
Don't fence me in.
(Robert Fletcher/Cole Porter)

A. JOSEPH W. M^cKNIGHT

1. *Southern Methodist University*

THE title may appear odd to you. It might belong in a category of publications that one author recently called: “There’s No Business Like Show Business.”¹ But an exercise in honor of Joe M^cKnight needs certain aplomb to bring my technical knowledge in line with his wider legal, historical and intercultural views. Add to this the state of Texas, where he stands as the “spirit of place”: “Texas is America’s Mona Lisa It is a heroine of a thousand faces Try to pin it down, distill it, define it, demystify it, and—well, good luck amigo. Texas is a slippery lanker of a myth, whose weight and scale may be too vast for words.”²

Joe introduced me to and helped me with “Geography and Law.”³ That is why I begin the title of this article with a geographical notion: “Global.”⁴ From geography,⁵ I proceeded to semiotics⁶ and accounting⁷ as indicated by the word “valuation” (as you will see).⁸ This started

* Professor of Law at the University of Muenster, Germany. J.D. University of Muenster 1960; LL.M., Yale Law School, 1963. Member of the Northrhine – Westfalian Academy of Sciences

1. Mark F. Anderson, *There’s No Business Like Show Business*, 50 J. LEGAL EDUC. 271 (2000).

2. Shermakaye Bass, *Eyes on Texas*, AUSTIN AM.-STATSMAN, Jan. 25, 1998, at D14.

3. Bernhard Grossfeld, *Global Accounting*, 48 AM. J. COMP. L. 261 (2000).

4. For a general background, see GLOBALISATION AND LEGAL THEORY (Christopher McCrudden & William Twining eds., Butterworths 2000); Jan Ward, *Citizens and Legislators of the World*, 51 N. IR. LEGAL Q. 630 (2000).

5. Bernhard Grossfeld, *Geography and Law*, 82 MICH. L. REV. 1510 (1984); Roy H. Andes, *A Triumph of Myth over Principle: The Saga of the Montana Open Range*, 56 MONT. L. REV. 485 (1995).

6. Cf. Roberta Kevelson, *Law as a System of Signs*, 1988; *id.* (ed.).

7. Bernhard Grossfeld, *Comparative Accounting*, 28 TEX. INT’L L.J. 233 (1993).

8. BERNHARD GROSSFELD, INTERKULTURELLE BEWERTUNG, LIBER AMICORUM RICHARD BUXBAUM, (2000).

when it came to mind that the world "legal" is derived from the Latin word "lex" and equals law, but in "lexicon" it stands for "word." Likewise the "Ten Words of Creation" (God as the "poet") first became the "Ten Words" from Mount Sinai and then the "Ten Commandments." They all stand for "cosmos" ("loving" order⁹/beauty, cf. "cosmetic") over chaos (the unruly, roaring, "merciless" sea¹⁰). Being back at Southern Methodist University in Dallas, Texas, I return to the environment that stirred my interests in these fields.

2. Geography

To begin, geography is not in vogue. W.H. Auden (whom I "consulted" in the age of "poetry and law") might have expressed the modern mood:

Space was holy to
pilgrims of old, till the plane
stopped all that nonsense.
(Shorts II)

But this is not true for Texas. Space, geography and law are, indeed, subjects that you cannot escape from when you are here. This is particularly true for a German lawyer who was "trained" for Texan prairies and canyons by Karl May, the best selling German author of all time. May described the places so well without ever having been here. His works are reasonably accurate portrayals of the terrain and the tribes of the Southwest. As the *Wall Street Journal* recently wrote on its front page: "Because of him, Germans are wild about the West, and many never lose their love for Winnetou, a brave Apache chief, and Old Shatterhand, a German-born frontiersman, who are the fictional heroes of his novels."¹¹

Indeed, the vastness and the dramatic differences in landscape and climate form a textbook that urges you read it. The legal history of Texas, the struggle for land and water between Indians, Mexicans, and European-Americans, and the rise of modern law in Texas can be traced back to geography (consider the catchwords "Staked Plains," "Big Spring," "Palo Duro Canyon," "fencing in/fencing out," and "water rights").

3. Semiotics¹²

From geography, it is only a short step to semiotics as every extended journey through Texas will teach you. You come across books like *Wisdom Sits in Places*¹³ or *The Earth Speaks*.¹⁴ Books on Indian sign lan-

9. Cf. W.H. AUDEN, *LAW LIKE LOVE*; PAUL LEHMANN, *ETHICS IN A CHRISTIAN CONTEXT* 255 (1963).

10. Cf. WALLACE STEVENS, *THE IDEA OF ORDER AT KEY WEST*. See also BERNHARD GROSSFELD, *ZEICHEN UND ZAHLEN IM RECHT* (2d ed. 1997).

11. Cecilie Rohwedder, *Karl May's Love of the Wild West Is Suddenly Mutual*, *WALL ST. J.*, Apr. 4, 2001, at A1.

12. HANNA FENICHEL PITKIN, *WITTGENSTEIN AND JUSTICE* (Univ. of Cal. Press 1972).

13. KEITH H. BASSO, *WISDOM SITS IN PLACES: LANDSCAPE AND LANGUAGE AMONG THE WESTERN APACHE* (1990).

14. PRINCESS ATALIE, *THE EARTH SPEAKS* (Steve van Matre & Bill Weiler eds., 1977).

guage¹⁵ tell us about the desire and the hope that semiotics can assist us in thinking like a foreigner and understanding even radically different cultures.

We realize that people engage in symbolic behavior all the time.¹⁶ Every place has its story and every story has its place.¹⁷ Though we inhabit a “nomos,” a normative universe, “no set of legal institutions or prescriptions exists apart from the narratives that locate it and give it meaning.”¹⁸ These *Just So Stories*¹⁹ make the social music in search of a harmony of nature preceding bureaucratic and administrative rules.²⁰ They are “hidden law” as described by W.H. Auden:

The Hidden Law does not deny
Our laws of probability,
But takes the atom and the star
And human beings as they are,
And answers nothing when we lie.

4. Corporations

The combination of geography and law is particularly appropriate with regard to corporations. Corporations operate in geographical markets, but they are virtual entities created by signs (letters) and perpetuated by them. They can only be effectively controlled by semiotic systems (numerals, market prices and accounting).²¹

I will pursue this “path of law” into appraisal rights, a technical field of modern corporation law, which brings geography and semiotics together. It is a particular chapter of the rather arcane subject of global corporate governance that has risen so high on the legal agenda.²²

15. WILLIAM PHILO CLARK, *THE INDIAN SIGN LANGUAGE* (L.R. Hamersly & Co. 1884) (1885); see, e.g., WILLIAM TOMKINS, *UNIVERSAL INDIAN SIGN LANGUAGE OF THE PLAINS INDIANS OF NORTH AMERICA* (1937).

16. Eric A. Posner, *Symbols, Signals, and Social Norms in Politics and the Law*, 27 J. LEGAL STUD. 765 (1998); See also Michel Owen Jones, *What's Disgusting, Why and What Does it Matter?*, 37 J. OF FOLKLORE RES. 53 (2000); Arthur J. Robson, *The Biological Basis of Economic Behavior*, 39 J. ECON. LITERATURE 11 (2001).

17. George A. Martinez, *Philosophical Considerations and the Use of Narrative in Law*, 30 RUTGERS L.J. 683 (1999); Austin D. Sarat, *Redirecting Legal Scholarship in Law Schools*, 12 YALE J.L. & HUMAN. 129 (2000).

18. Stephen J. Werber, *Cloning: A Jewish Law Perspective with a Comparative Study of Other Abrahamic Traditions*, 30 SETON HALL L. REV. 1114, 1123 (2000).

19. RUDYARD KIPLING, *JUST SO STORIES FOR LITTLE CHILDREN* (Doubleday, Page & Co. 1902) (1927); Cf. Jeanne L. Schroeder, *Just So Stories: Posnerian Methodology*, 22 CARDOZO L. REV. 351 (2001).

20. Peter Goodrich, *Operatic Hermeneutics: Harmony, Euphantasy and Law in Rosini's Semiramis*, 20 CARDOZO L. REV. 1649, 1653 (1999).

21. Bernhard Grossfeld, *CyberCorporation Law: Comparative Legal Semiotics v. Comparative Legal Logistics*, 35 INT'L LAW. (forthcoming 2001). For the history, see Paddy Ireland, *Company Law and the Myth of Shareholder Ownership*, 62 MOD. L. REV. 32 (1999).

22. Bernhard Grossfeld, *Loss of Distance: Global Corporate Actors and Global Corporate Governance—Internet v. Geography*, 34 INT'L LAW. 963 (2000).

B. THE ISSUE

1. Valuation

Under the appraisal concept, all fifty states of the U.S. give minority shareholders the right to “fair value” of their shares when they dissent from certain fundamental transactions. The evaluation of corporations in appraisal proceedings is thus part of a broader chapter on corporate finance.²³ Certainly, the valuation of corporations in appraisal situations is not commonly associated with geography and law. It is regarded as the accountants’ work grounded in abstract mathematical formulas, on law of probability and on obscure numerology.²⁴ But by putting my story into a trans-border context, the interrelations between geography and law will be easily recognizable.²⁵ We will have to answer several questions: Where do we look to find the relevant markets? How do we define “places”? Could this choice be influenced by a particular semiotic system, such as by a currency?

I will discuss the international high buttons in view of the rise of global finance in a “global casino”²⁶ (or a game of “global poker”), thus comparing the intricacies of “mathematics” to game theory.²⁷ There are two sets of facts to be discussed: The “patterns” or “rules” followed when evaluating a *foreign* corporation in an appraisal-like situation (foreign appraisals) and the evaluation of a *domestic* corporation with many subsidiaries around the globe (domestic appraisals). This leads us into multinational business valuations. You will see that “location, location, location” means a lot for the process of appraisal and that “wisdom sits in places.” I will not discuss questions of evaluations in corporate mergers, reorganizations and bankruptcies,²⁸ though I refer sometimes to opinions expressed in that context.

2. Lawyers’ Job

Valuation for “fair value” is much more than just “forensic economics” or “financial economics.” Unfortunately, lawyers are usually not trained for the job,²⁹ mainly under the pretense that it is not “real” law. Apparently we are *so* tuned in and spellbound by the symbiosis of letters and law (for example, the French “*faculte de droit et lettres*”) that other signs, such as numerals, are not recognized as masks for law.

23. Barry M. Wertheimer, *The Purpose of the Shareholders’ Appraisal Remedy*, 65 TENN. L. REV. 661 (1998).

24. Bernhard Grossfeld, *Lawyers and Accountants: A Semiotic Competition*, 36 WAKE FOREST L. REV. 167 (2001) [hereinafter *Lawyers and Accountants*].

25. I was inspired by the work of KENGELBACH, *UNTERNEHMENSBEWERTUNG BEI INTERNATIONALEN TRANSANKTIONEN* (2000).

26. Paddy Ireland, *Stakeholding in the Global Casino: A Reply to David Campbell*, 24 J.L. Soc’y 276, 279 (1997).

27. Bernhard Grossfeld, *The Invisible Hand: Patterns of Order in Comparative Law*, J. OF S. AF. L. 648 (1997). See also GEOFFREY ROBERTSON, *THE JUSTICE GAME* (Chatto & Windus 1998).

28. MARK J. ROE, *CORPORATE REORGANIZATION AND BANKRUPTCY* 13–34 (2000).

29. ROE, *supra* note 28, at 19.

However, in recent years, these legal aspects have caught the courts' eye and have been contested to the minutest detail.³⁰ The turning point came in 1983 with *Weinberger v. UOP, Inc.*³¹ In this landmark opinion, the Delaware Supreme Court abandoned the outdated and conceptually flawed "Delaware block method" as an exclusive means to establish fair value.³² The Court paved the way for the "discounted cash flow" or even a "capital cash flow" valuation.³³ Above all, this decision led to more judicial scrutiny in general. In Germany, valuation has even become a constitutional question dealt with by the Constitutional Court,³⁴ though this might raise questions of judicial overreach.³⁵

3. General Aspects³⁶

It is now clear that the dissenters receive a proportionate share of the firm's going concern value, and that minority discounts are out,³⁷ which appears to be true for control premiums (upward adjustments to the appraisal value to obtain a proportionate share of the control premium).³⁸ Lawyers also have to consider third-party sales values and the sharing of synergies,³⁹ referring to the additional economic value created by corporate acquisitions that move assets to more efficient hands.⁴⁰ There are many other questions for lawyers: the interaction of past and future cash flows, factors to be taken into account when assessing the future, and different concepts of time (what counts as past, what counts as future within an ongoing process).

4. Stock Market Prices

Stock market prices are another hot issue.⁴¹ In many states, the appraisal right is not granted when there is a well-traded market for shares (stock market exception for appraisal rights). But is the "efficient mar-

30. *Steiner Corp. v. Benninghoff*, 5 F. Supp. 2d 1117 (D. Nev. 1998); see, e.g., *In re New York, New Haven & Hartford R.R.*, 4 B.R. 758 (D. Conn. 1980).

ROE, *supra* note 28, at 19.

31. 457 A.2d 701 (Del. 1983). See Michael Schwenk, *Valuations Problems in the Appraisal Remedy*, 16 CARDOZO L. REV. 649 (1994).

32. Schwenk, *supra* note 31, at 665.

33. For details, see Note, *Using Capital Cash Flows to Value Dissenters' Shares in Appraisal Proceedings*, 111 HARV. L. REV. 2099 (1998) [hereinafter *Capital Cash Flows*].

34. *Lawyers and Accountants*, *supra* note 24, at 178.

35. Cf. J.A.G. Griffith, *The Brave New World of Sir John Laws*, 63 MOD. L. REV. 159 (2000).

36. Barry M. Wertheimer, *The Shareholders' Appraisal Remedy and How Courts Determine Fair Value*, 47 DUKE L.J. 613 (1998).

37. *Id.* at 641. *Friedman v. Beway Realty Corp.*, 661 N.E.2d 972 (N.Y. 1995); *Cavalier Oil Corp. v. Harnett*, 564 A.2d 1137, 1144 (Del. 1989).

38. *Steiner Corp. v. Benninghoff*, 5 F. Supp. 2d 1117 (D. Nev. 1998); but see also *Rapid Am. Corp. v. Harris*, 603 A.2d 796 (Del. 1992).

39. Wertheimer, *supra* note 36, at 654, 658.

40. Rutherford B. Campbell, Jr., *Fair Value and Fair Price in Corporate Acquisitions*, 78 N.C. L. REV. 101, 112 (1999).

41. *Lawyers and Accountants*, *supra* note 24; *Using Capital Cash*, *supra* note 33, at 2102.

ket" assumption generally acceptable for actively traded stocks when the statutory market exception does not apply? Should courts refer to stock market prices when fixing fair value?

The answer is difficult. Sure, these prices stand for market values. But stock prices often swing wildly (on the NASDAQ) over short periods of time. Disclosure rules might not be sufficiently effective.⁴² Rumors of an impending takeover as well as insider trading can run up the stock price. It is unknown when the run-up begins. Those who control the transaction also control the time,⁴³ which they might do to *their* benefit. Therefore, stock market prices may reflect factors that do not adequately refer to the long-term "fair value" of the corporation. "There are too many accidental circumstances entering into the making of market prices to admit them as sure and exclusive reflectors of fair value."⁴⁴ Therefore, stock prices cannot be the only basis for fair value. They *can* and *should* be used as a cross-check on an independent appraisal.⁴⁵

5. *Experts*

Courts in the U.S. are slowly moving toward viewing appraisals as matters of law. A statement like, "[t]he court is charged with the statutory responsibility of conducting the appraisal and should not excessively delegate that responsibility to the neutral expert,"⁴⁶ mirrors the present trend. Notwithstanding these noble words, in reality, the outcome continues to be defined by experts who are accountants, not lawyers.⁴⁷ I do not know whether there is "an absolute chasm between lawyers and accountants."⁴⁸ But so far, we all share a tendency to be cowed by the accountants' authority. The result is growing frustration:

One might expect the experts' desire to convince the Court of the reasonableness and validity of their assumptions and financial models would produce a somewhat narrow range of values, clearly and concisely supported, despite the individual parties' obvious conflicting incentives. Unfortunately, as this case and other cases most decidedly illustrate, one should not put much faith in that expectation, at least when faced with appraisal experts in this Court.⁴⁹

Today, courts show their increased interest in the legal side by using court appointed neutral experts.⁵⁰ But the situation remains puzzling to lawyers unaccustomed to the world of corporate finance. For most of

42. Paul G. Mahoney, *The Political Economy of the Securities Act of 1933*, 30 J. OF LEGAL STUD. 1 (2001).

43. Wertheimer, *supra* note 36, at 637. See Berkowitz v. Power/Mate Corp., 342 A.2d 566 (N. J. Super. Ct. Ch. Div. 1975).

44. Chicago Corp. v. Munds, 172 A. 452, 455 (Del. Ch. 1934).

45. *Capital Cash Flow*, *supra* note 33, at 2103.

46. Wertheimer, *supra* note 36, at 701. .

47. *Lawyers and Accountants*, *supra* note 24.

48. Joseph Bankman, *The Business Purpose Doctrine and the Sociology of Tax*, 54 SMU L. REV. 149, 152 (2001).

49. Gilbert v. MPM Enters., 709 A.2d 663, 666-67 (Del. Ch. 1997).

50. *In re Shell Oil Co.*, 607 A.2d 1213, 1222 (Del. 1992); Kleinwort Benson Ltd. v. Silgan Corp., No. 11107, 1995 WL 376911 at 2 (Del. Ch. June 15, 1995).

them, the issue continues to be perplexing and thus, unprincipled decision making is the order of the day.⁵¹ This is all the more troubling as the definition of fair value has wide macro justice implications. It affects the allocative efficiency of a society's assets and the fairness of the distribution of the assets among her citizens.⁵²

6. *Discounted Cash Flow Method*⁵³

The question is whether the general outlines developed so far are sufficient to exert a legal control over the appraisal process. Lawyers are reticent to look too deeply into "mathematics," though a "craft oriented" approach is necessary to be able to oversee the "experts," who are the craftsmen. Let's delve briefly into the craft background.

Economic value is expectation of future income. The basic premise is that a company's worth today is a reflection of expected future cash flows. As "today" is already gone, valuation is totally future oriented. It is disciplined gambling over the future. No method, however mathematically refined, can cover up this simple truth:

But who on earth can think
With heavy heart or light
Of what will come of this?⁵⁴

The older "earnings value" approach (focusing more on the corporation as an enterprise "as such") has now largely been replaced by the "discounted cash flow" (focusing more on "shareholder value").⁵⁵ As "cash is king," future cash flow is the name of the game and we meet the "cash flow of justice." The earnings approach had its appeal in its focus on financial statements, which shows "earnings" and thus provides a basis from where to start. But this "simplicity" is now also available for cash flows, as modern rules of accounting require cash flow statements. A share of the corporation is then regarded as a claim for future cash flows, not future earnings. Debts are repaid through cash, not through earnings (which do not show the level of liquidity). Though in the long run earnings should equal cash flows, in the short run there might occur timing differences between the recognition of earnings and the receipt of cash. This can lead to considerable differences in valuation.⁵⁶

In addition, it is globalization that makes cash flows more attractive than earnings as an international yardstick. Earnings are the result of many discretionary decisions that are tainted by different and often submerged cultural assumptions (consider depreciations or the setting up of hidden reserves). Cash flows can be measured objectively, as cash is cash

51. Campell, *supra* note 40, at 123, 129.

52. *Id.* at 29-30.

53. For details, see TOM COPELAND ET AL., VALUATION: MEASURING AND MANAGING THE VALUE OF COMPANIES (John Wiley & Sons, Inc. 2000) (1990); available at www.Wileyvaluation.com, www.law.wfu.edu/courses/law&value-palmiter/index.htm.

54. W.H. AUDEN, TEN SONGS IX (1942).

55. *Steiner Corp.*, 5 F. Supp 2d at 1129.

56. *See infra* E. 2.

in any money-oriented economy. This is a fine example for the argument that different geographical arenas favor different semiotic systems.

The discounted cash flow method sees the corporation as a collection of cash flows for the shareholders.⁵⁷ The value of these future cash flows defines the value of the firm. The core concept is "free cash flow." The total after-tax cash flow is available to those who provide the corporation's capital, both creditors and shareholders. It can be defined as the after-tax cash flow for shareholders (if the corporation had no debt). The free cash flow is, therefore, present before financing and is not affected by the corporation's financial structure.

7. Discount Rate

Most important, however, is the discount rate used to arrive at the present value.⁵⁸ We must distinguish between the capital costs of equity and the capital costs for debt. The financial structure as expressed by the ratio of equity to debt financing comes in through the Weighted Average Cost of Capital ("WACC"), which is equity, debt, and other financing resources taken together. We then arrive at the estimated cost of capital that we use as the discount rate to convert future free cash flows into present value for shareholders.⁵⁹

The interest rate normally has the largest effect on valuation, depending on the "duration" of the forecasted cash flows. The courts must scrutinize the interest rate carefully because it is so sensitive to even small differences due to the exorbitant power of interests and compound interests. This leads to the high variability in outcomes. If the "duration" is five years, a 1% increase in the discount rate will reduce the value of the minority shares by approximately 5%.⁶⁰ In *Gilbert v. MPM Enterprises*,⁶¹ different rates led to valuations ranging from \$82 to \$357 million. In practice, "experts" structure their models according to "their" parties' hopes. "Experts," for the squeezed-out minority shareholders, use a low discount rate and arrive at a high per-share value; "experts" for the acquiring party use a high discount rate to find a low per-share value. It is here that the "battle of the experts" occurs and any confident prediction (without fear and research) comes to an early end.

8. Valuation Formulas

The technical concepts within the formulas for cash flow methods also deserve our attention. Is the cash flow method appropriate? As we have seen, the discount rate is the WACC, which equals the weighted average of the cost of equity and the after-tax cost of debt.

57. Charles Chatterjee, *The Use of the Discounted Cash Flow Method in the Assessment of Compensation*, 10 J. INT'L ARB. 19 (1993).

58. For the formula used, see ROE, *supra* note 28, at 24.

59. COPELAND, *supra* note 53, at 167, 201.

60. *Id.* at 207.

61. 709 A.2d 663, 667-68 (Ch. Del. 1997).

a. Capital Asset Pricing

Whereas the capital cost of debts is recognizable from the interests actually incurred, the problem starts with the cost of equity. It is very difficult to estimate the cost of equity financing as it cannot be taken directly from the market. The most favored capital asset pricing model ("CAPM") postulates that these costs are equal to the return on risk-free securities bonds (mainly U.S. government bonds) plus the risk factor. This risk factor equals the corporation's systematic risk (its "beta") multiplied by the market price of risk (market risk premium).⁶² Unfortunately, the market risk premium is one of the most vexing issues. It depends on the period chosen and the index referred to. Copeland, Koller, and Murrin recommend, as a rule of thumb, using a 4.5 percent to 5 percent risk premium for U.S. corporations.⁶³ In Germany, 5% is the recommended rate.⁶⁴

The "beta" is even more vexing as it is an open question as to whether average market returns are positively related to market betas.⁶⁵ It might give better results to look up the size of the corporation (measured by the value of its equity capitalization) and the market-to-book ratio. "If beta is not dead, then surely it's wounded."⁶⁶ But practitioners stick to CAPM "being wary of all the problems with estimating it."⁶⁷ It is unsettled whether the arbitrage pricing model, using a multifactor approach, is the better solution.⁶⁸

b. Weighted Average Cost of Capital

The weights to be taken into account are the relative amount of equity and debt in the combined post-merger company. The flaw here is that the discount rate is found by forecasting the capital structure of the corporation.⁶⁹ So far, most courts and most academic commentators "have assumed a constant WACC in calculating the present value of cash flows."⁷⁰

Most mergers, however, involve changes in the capital structure of the acquiring and the target firm. Junk bond financing often dramatically changes the structure of the acquiring firm. But will the relation to equity stay the same over a valuation period of more than 30 years or so? That is unlikely to be true. Typically, it is anticipated to pay down the acquisition-related debt over some period to move to its optimal position in

62. For a detailed discussion, see RICHARD BREALEY & STEWART MYERS, *PRINCIPLES OF CORPORATE FINANCE* (5th ed. 1999).

63. COPELAND, *supra* note 53, at 216.

64. Lutz Kruschwitz, *Die Steuer spielt bei der Investitionsberechnung eine wichtige Rolle*, FRANKFURTER ALLGEMEINE, Apr. 9, 2001, at Nr. 84, p. 30.

65. Eugene Fama & Ken French, *The Cross Section of Expected Stock Returns*, 47 J. FIN. 427 (1992).

66. COPELAND, *supra* note 53, at 224.

67. *Id.* at 226.

68. *Id.*

69. *Capital Cash Flows*, *supra* note 33, at 2105-06.

70. *Id.* at 2106.

terms of variables like debt structure.⁷¹ The result is clear. Discounted cash flow models "that do not incorporate a changing capital structure will either overvalue or undervalue the minority shares."⁷²

In theory, the answer would be to change the discount rate from year to year, but experts on both sides avoid this "subtlety" because it increases the technical complexity and might exasperate judges.

c. Capital Cash Flow

As previously discussed, this method uses the same cash flow forecasts as the discounted cash flow model but tries to reduce the uncertainty in the discount rate.⁷³ It is designed for corporations that are highly leveraged or for corporations with fast changing capital structures. Therefore, it does not use the WACC but the cost of assets method, which does not depend on the capital structure of the firm. Whereas WACC needs seven inputs, the cost of assets method only requires the following three: (1) the risk-free interest rate; (2) the beta of the corporation; and (3) the risk premium. This reduces the uncertainty in the discount rate and the variation in the valuation outcome. Lawyers cannot avoid participating in this discussion.

C. FOREIGN VALUATIONS

1. Art

The *Weinberger* court refers to valuation as an "art." This is understandable when I quote from Copeland, Koller, and Murrin, who explain the "art of valuation" as "depend[ing] mainly on understanding the business, its industry, and the general economic environment, and then doing a prudent job of forecasting."⁷⁴

Careful thought and hard work leads to foresight. "Correct methodology is only a small but necessary, part of the valuation process."⁷⁵ Methodology is a "sensitivity analyses."⁷⁶ Yet, how "sensitive" are we abroad? Are our senses related to "our" geography and to "our" signs?

2. International Concept

The discounted cash flow method has found international approval through the World Bank's "Guidelines on the Treatment of Foreign Direct Investment" from 1992.⁷⁷ They deem a compensation to be "reason-

71. *Steiner Corp.*, 5 F. Supp. 2d at 1125.

72. *Capital Cash Flows*, *supra* note 33, at 2106.

73. Richard S. Ruback, *An Introduction Cash Flow Valuation Methods*, Harvard Business School Note No. 9-295-155 (Rev. Oct. 16, 1995); *Capital Cash Flows*, *supra* note 33, at 2110.

74. COPELAND, *supra* note 53, at 292.

75. *Id.*

76. *Id.* at 297.

77. Guidelines on the Treatment of Foreign Direct Investment, 31 INT'L LEGAL MATERIALS 1379 (1992); International Center for Settlement of Investment Disputes (IRSC) Review, FOREIGN INVESTMENT L.J. 297 (1992).

able” if it is based on the discounted cash flow value, which it defines as follows:

The cash receipts realistically expected from the enterprise in each future year of its economic life as reasonably projected minus that year’s expected cash expenditure, after discounting this net cash flow for each year by a factor which reflects the time value of money, expected inflation, and the risk associated with such cash flow under realistic circumstances. Such discount rate may be measured by examining the rate of return available in the same market on alternative investments of comparable risk on the basis of their present value.⁷⁸

3. *DaimlerChrysler*

a. Merger of Equals

But this technical, universal language has its flaws. The trans-border aspect affects every valuation from the very beginning. All our domestic and even technical concepts are tuned to an unconscious domestic system of reference. Though this is common knowledge in comparative law, “practitioners” sometime care little about it. The Daimler-Benz/Chrysler merger is an example of this. Here, the parties wanted to perform a “merger of equals” under the “pooling of interest method” as proposed in Accounting Principles Board No. 16. It enabled the future Daimler/Chrysler group to maintain the book values of the merged corporations’ assets in its financial statements. No acquired good had to be shown, which avoided the ensuing write-off of goodwill, and thereby decreased future profits, not the cash flows.

b. Valuation Method

The parties initially started on the basis of stock exchange capitalization for both companies according to the quoted stock prices as of April 15, 1998.⁷⁹ However, the dissection of the values demonstrated that, in comparison with Daimler-Benz, the market value of Chrysler would have been undervalued by twenty-eight percent.⁸⁰ “Accordingly, the market value of Chrysler had to be adjusted to the higher discounted earnings value, and this adjustment taken into account in the Business Combination Agreement.”⁸¹

But how did they know from the outset that Chrysler was undervalued? The deviation from the stock market price, as a cross check, needed a thorough discussion; but this was not done. This is probably due to the fact that under the then prevailing view in Germany, which is currently outdated, stock prices were not a consideration because they were re-

78. Guidelines, *supra* note 75, at 1383.

79. Business Combination, Daimler-Benz/Chrysler, Management Report, 1998.

80. *Id.*

81. *Id.*

garded as erratic and unreliable. But, could that also be an argument for a corporation listed on Wall Street?

c. German Rules

Another striking aspect is that the valuations of both Daimler-Benz and Chrysler were performed by *German* valuation principles. This distinction became crucial for the discount rate. The risk-free base rate for both firms was taken from the capital markets condition in Germany "as both Daimler-Benz AG and DaimlerChrysler AG are based in Germany and the profit distributions are in DM. Consequently, the alternative investment is also in DM."⁸² The approach may be acceptable for the risk-free base rate, though it is open to discussion whether the currency (DM) defines the markets for alternative investments of *American* shareholders.

d. Risk Premium

The critical point comes with the risk premium. The Management Report tells us:

The level of the risk premium reflects the respective risk of the company and its industry and, thus, the range for the results of the business being valued. Based on different historical empirical studies, the average risk premium over extended periods of time was between approximately 4 to 6 percent. As Daimler-Benz and Chrysler operate primarily in the same industry, a uniform risk factor of 3.5 percent was used. The Factor is on the low end of the range determined.⁸³

Doesn't the difference between Germany and the U.S. matter? Aren't Daimler-Benz and Chrysler at the same level within the industry when compared with competitors, especially those in Japan?

The following remarks do not clarify the issue:

According to the CAPM (Capital Asset Pricing Model), the risk premium is calculated as the market price for assuming risk in the capital market (market risk premium) multiplied by the risk for an individual enterprise (beta factor). The use of beta factors would tend to lead to risk premiums exceeding 3.5 percent for both companies. As the beta factors provided by various institutions varied significantly, beta factors were not used.

Crucial for these considerations was that, although a parallel change in the uniform risk premium for Daimler-Benz and Chrysler would lead to changes in the absolute business values, the relationship would remain practically unchanged. Because determining the exchange ratio depends only on the relative values, the use of different risk premiums would have practically no impact on the calculated exchange ratio.⁸⁴

82. *Id.*

83. *Id.* at 88.

84. *Id.*

But the question remains whether the risk premiums should have been “uniform.” It would have been better to look more closely into the local environment, into the local “feeling” for value. The stock prices for Chrysler could have served as a kind of red light. Wisdom sits in places!

The technique chosen is a thinly disguised mathematical mask for “The World As Will and Representation.”⁸⁵ Or is it just proof of the fact that we perceive reality through our imagination as a kind of “sixth sense”?⁸⁶

4. Foreign Law

The problem of foreign law even precedes the appraisal discussion. Foreign law comes into play as soon as we start any valuation abroad. Our target exists only in consideration of foreign law and in its creature. Its value is determined by the institutional structure of the foreign environment.⁸⁷

It is foreign law that tells us whether valuation as a unity is feasible because the approach is based on the concept that the parent corporation has sufficient legal power to distribute the cash flow to shareholders. Thus, the concept of “control,” as defined by foreign law, is crucial. It also draws the sometimes shady line between equity and debt, and defines the *free* cash flow in terms of how much of it can be taken out. It limits the shareholders’ proportionate shares. It is also wise to determine what method of valuation is the standard in the particular country. Additional considerations include what indexes are referred to, what “betas” are available, and whether they are regarded as being trustworthy. There is no way around local expertise with numbers. Wisdom sits in places and “if a culture is a community of meaning, local discourse is the port of entry into that community.”⁸⁸

D. FOREIGN APPRAISALS

1. Introduction

So far we have seen that valuation is not just accounting and mathematics. Valuation is “mathematics in context”⁸⁹ and as always, context creates meaning. Yet as lawyers like to say, “[i]t all depends.” Attempts to transform appraisals into questions of rationality are doomed.⁹⁰ This is particularly true in trans-border appraisals. Differing legal cultures and corporation law color every detail of the valuation process.

85. Arthur Schopenhauer (1851).

86. MICHEL GUILLEN, BRIDGES TO INFINITY 5 (1983).

87. Pradeep K. Chhibber & Sumit K. Majumdar, *Foreign Ownership and Profitability: Property Rights, Control, and the Performance of Firms in Indian Industry*, 42 J.L. & ECON. 209 (1999).

88. Kenneth L. Karst, *The Privatization of our Public Discourse: Local Discourse and the Social Issues*, 12 CARDOZO STUD. LAW & LITERATURE 1, 3 (2000).

89. Cf. REUBEN HERSH, WHAT IS MATHEMATICS REALLY (1999); ALAN WATSON, LAW OUT OF CONTEXT 54 (2000).

90. Cf. Francis J. Mootz III, *Law in Flux: Philosophical Hermeneutics, Legal Argumentation, and the Natural Law Tradition*, 11 YALE J.L. & HUMAN. 311 (1999).

However, this is not a common opinion among accountants. Copeland, Koller, and Murrin ask, “[d]oes everything that we have described about valuation apply outside the United States?” The answer is: “Absolutely.”⁹¹ This is an overstatement, to say the least, and not just because of accounting differences.⁹² There is no autonomous mathematical model that provides right answers everywhere. Even valuations require narratives⁹³ to fill the gaps between reality and signs. That is why evaluation is not the same in all places. *Different* wisdoms sit in *different* places. By the same token, conflict of law⁹⁴ and comparative law are important factors to be taken into account. They provide the comprehensive approach that is required.⁹⁵ Geography raises her head even above these “waters.” The search for varying degrees and different levels of applicable law as well as the legal externalities, remains crucial. Technocentrism in law⁹⁶ will reach its limits in the near future.

2. *Conflict of Laws*⁹⁷

Given the fact that law governs appraisals, conflict of law stands in the forefront. However, appraisals are seldom discussed as a matter of conflict of laws.⁹⁸ Copeland, Koller, and Murrin tell us that, “[v]aluing foreign subsidiaries of multinational companies follows the same basic approach and employs the same principles as valuing business units of domestic companies.”⁹⁹ They refer to several “wrinkles” to be considered but fail to mention conflict of laws, which is understandable from their accountants’ point of view, but is not acceptable from a lawyer’s.

It seems to be a matter of course that appraisals are part of the internal affairs of a corporation and are, therefore, governed by the law of incorporation. Yet it is unclear whether a squeeze *out* is still *internal*. The United States Supreme Court compares the internal affairs doctrine to “the relationship among or between the corporation and its current officers, directors, and shareholders,” with the purpose of protecting the corporation from “conflicting demands.”¹⁰⁰ As corporations are “entities whose very existence and attributes are a product of state law” it “is an accepted part of the business landscape in this country for States to create corporations, to prescribe their powers, and to define the rights that are

91. COPELAND, *supra* note 53, at 353.

92. *Id.* at 354.

93. Cf. Elizabeth Villiers Gemmette, *Law and Literature: An Unnecessarily Suspect Class in the Liberal Arts Component of the Law School Curriculum*, 23 VAL. U. L. REV. 267 (1989); ANTHONY G. AMSTERDAM & JEROME BRUNER, *MINDING THE LAW* (2000).

94. *In re New York*, 4 B.R. at 758.

95. Bernhard Grossfeld, *Comparative Law as a Comprehensive Approach: A European Tribute to Professor Jack A. Hiller*, 1 RICH. J. GLOBAL L. & BUS. 1 (2000).

96. Margaret Thornton, *Technocentrism in the Law School: Why the Gender and Colour of Law Remain the Same*, 36 OSGOODE HALL L.J. 369 (1998).

97. Grossfeld, *supra* note 22.

98. For bankruptcies, see *In re New York*, 4 B.R. 758.

99. COPELAND, *supra* note 53, at 335.

100. *Edgar v. Mite Corp.*, 457 U.S. 624, 645 (1982).

acquired by purchasing their shares.”¹⁰¹ But in Delaware, the rule might not be as firmly established as originally hoped.¹⁰² *Western Airlines*¹⁰³ and *Norlin*¹⁰⁴ are knocking at the door. The appraisal situation can be equated to “sales” or “transfers” in the language of *Western Airlines*. This may lead to the crossword puzzle of modern conflict of laws—approaches.¹⁰⁵ The issue remains even more controversial when we transfer it to private international law, meaning choice of law and rules for international situations.¹⁰⁶

3. Corporation

a. Corporate Interests

The questions to be considered start well before we go into the intricacies of foreign law. We must first find out whether our concept of shareholder value and cash flow valuation fit the other country’s concept of “corporation.” Is it just a “collection of cash flow” for shareholders as we define it?¹⁰⁷ Underlying our definition is the assumption that the shareholders are the only stakeholders, the corporations themselves “having been spirited out of existence.”¹⁰⁸ It is a natural corollary of our approach that the interests of shareholders take priority and that these interests should structure the valuation proceeding. But even in our own legal cultures the view is often held to be insufficient to cover the conceptual and theoretical conundrums that beset corporation law. Accordingly, different images of shareholders occur as owners, beneficiaries, bystanders, and participants in a political entity.¹⁰⁹ It might come under renewed pressure when taking into account the sometimes conflicting interests of local stakeholders, creditors and shareholders.

b. Public Bodies

Other legal cultures might see the corporation as having a more independent life. They may advocate its recognition as a public body with aspirations of its own that exert a kind of ownership *per se*. They might regard it as an enterprise, encompassing the varying interests of a wide range of stakeholder groups: investors, creditors, employees, local com-

101. *CTS Corp. v. Dynamics Corp.*, 481 U.S. 69, 89, 91 (1987).

102. *McDermott, Inc. v. Lewis*, 531 A.2d 206 (Del. 1987); *Draper v. Gardner Defined Plan Trust*, 625 A.2d 859 (Del. 1993).

103. *W. Air Lines, Inc. v. Sobieski*, 191 Cal. App. 2d 399 (Cal. Ct. App. 1961).

104. *Norlin Corp. v. Rooney, Pace, Inc.*, 744 F.2d 255 (2d Cir. 1984).

105. See Friedrich K. Juenger, *How Do You Rate a Century?*, 37 WILLAMETTE L. REV. 89 (2001) (categorizing the three basic approaches to conflict of laws as substantive unilateralist, and multilateralist).

106. Friedrich K. Juenger, *The Lex Mercatoria and Private International Law*, 60 LA. L. REV. 1133 (2000).

107. ROE, *supra* note 28, at 13.

108. Paddy Ireland, *Company Law and the Myth of Shareholder Ownership*, 62 MOD. L. REV. 32, 33 (1999).

109. Jennifer Hill, *Visions and Revisions of the Shareholder*, 48 AM. J. COMP. L. 39, 42-59 (2000).

munities, and managers. In short, they may pursue a myth other than individual shareholder property by stressing the fundamentally social nature of corporate assets.¹¹⁰ These ideas have found new support because of the growth of multinational corporations.¹¹¹ This in turn led to attempts to introduce labor as a corporate governance participant and as an independent power.¹¹² In view of these developments, the discounted cash flow method is blamed for allowing shareholders "to claim the largest amount possible" at the expense of other stakeholders.¹¹³

c. Perpetuity/Mort Main

We have to consider that incorporation conveys the right to do business in perpetuity as a kind of mort main (dean hand). In economic analysis, this triggers the power of interest and compound interest into new dimensions. This result could not be achieved by shareholders alone and without public consent, without the "privilege" of incorporation, not to mention continued statutory safeguards. Thus, the corporation is a "cultural and economic product" of a particular "source community."¹¹⁴ The general public created the corporation as an "immortal legal person" to strike a balance between private investors and a heterogeneous policy between economic power and the public domain.

It is easily understandable that legal cultures have different views about the private or public nature of public corporations that dominate the economy due to their "immortality." Corporation law itself may still contain antitrust aspects, which we revised to reinstate as antitrust laws.¹¹⁵ As part of the discussion about the powers of transnational corporations, this has again become a matter of high concern.¹¹⁶

Appraisals cut lines and distribute wealth between hosts of stakeholders whose past concerns have been swept under the carpet. In other cultures they might reappear in a sometimes silent, disguised way, and affect the outcome of any valuation. Other cultures might expect an identity tax or an economic benefit upon distribution. Evaluations, then, combine value judgments into many directions. Certainly, there is mathematics in it, but it is a kind of non-linear mathematics of probabilities that mathematicians never completely control. Chaos is, and has been, however, *the* playing field for the lawyers' art ("*ars aequi et boni*").

110. *Id.* at 52.

111. PETER MUCHLINSKI, *MULTINATIONAL ENTERPRISES AND THE LAW* 19-47, 75-76 (1995).

112. See generally Colloquium, *Enterprise and Community: New Directors in Corporate Governance*, 24 J.L. Soc'y 1 (1997).

113. Chatterjee, *supra* note 56, at 22.

114. Cf. Susan Scafidi, *Intellectual Property and Cultural Products*, 81 B.U. L. REV., 793, 839-42 (2001).

115. BERNHARD GROSSFELD, *AKTIENGESELLSCHAFT, UNTERNEHMENSKONZENTRATION UND KLEINAKTIONAER* (1968); *Louis K. Liggett Co. v. Lee*, 288 U.S. 517 (1933) (Brandeis, J., dissenting).

116. MUCHLINSKI, *supra* note 106, at 322; Ireland, *supra* note 26.

4. *Scope*

Foreign law guides all other legal aspects of the appraisal remedy. It distinguishes law from facts and shows us the subject matters mentioned above as well as the appraisal methods to be used. If the foreign law does not answer a question, the gap cannot be filled by a per se reference to general mathematical formulas or an economic model or to universal sound business judgments. Sound, like mathematics, is a matter of context. The answer must be found within the foreign law and within the foreign cultural environment's economic views of the world. This is particularly important for concepts of time (for example, are we to apply perpetuity calculations?¹¹⁷) for inflation valuation and for taking into account the shareholders' statistically typical tax burden. The foreign law determines what is "typical."

5. *Cost of Capital/Currency*

The foreign law defines the cost of capital, the relevant market for interest rates, the relevant index to be used over what period of time, and the betas.¹¹⁸ It shows us how to find the applicable discount rate. It will tell us whether we have to refer to a national or to a global financial market, depending on the circumstances. As a general principle, we discount the foreign cash flow with the foreign risk adjusted rate.¹¹⁹

The foreign law also controls the currency for the valuation (typically the home currency).¹²⁰ "It should be clear that if cash flow is predicted in units of the foreign currency, it should be discounted at the foreign country discount rate because this rate reflects the opportunity cost of capital in the foreign country, including expected inflation and the market risk premium."¹²¹

6. *Beyond Law*

But the impact of the place goes beyond the law. Mathematics is controlled by "grounded views."¹²² Cultural factors outside the law color and coordinate all steps, and may even "subject them to divine scrutiny."¹²³ The dreams of order may be different from ours because culture produces

117. See WILLIAM J. CARNEY, *MERGERS AND ACQUISITIONS* 388 (2000).

118. *Id.* at 336.

119. *Id.* at 345.

120. COPELAND, *supra* note 53, at 342.

121. *Id.* at 345.

122. See also Russel L. Barsh, *Grounded Visions: Native American Conceptions of Landscapes and Ceremony*, 13 ST. THOMAS L. REV. 127 (2000) (explaining that the cultural integrity of Native Americans is grounded in landscapes, traditions, and "intangibles" that far exceeded the scope of the law).

123. Dennis W. Carlton & Avis Weiss, *The Economics of Religion, Jewish Survival, and Jewish Attitudes Toward Competition in Torah Education*, 30 J. LEGAL STUD. 253, 255 (2001) (arguing that the focal points of the California gold field culture—individualism, equality, respect for property, and rewards commensurate to work—led to culturally accepted norms and concepts of fairness).

a variance. Therefore, to imagine a cultural concept of fair value¹²⁴ means to imagine a form of life.¹²⁵ Certainly, there are a number of rational choice explanations, but for fair values, we must stress the importance of culture. Fairness provides “focal points around which collective action problems” can be solved.¹²⁶

The process begins with growth potential and carries forward to the question of whether employees’ codetermination increases or decreases the value of the firm. Then, it goes on further to differentiate views about equality among shareholders and “shareholder values.” Other important factors to consider include beliefs or disbeliefs in efficient markets, whether a market price reflects a “just price,” and the effect of artificial manipulation on the function of an open market.¹²⁷ Different concepts of time are again of great importance. What is considered short term and what is considered long term? When is an account regarded as being “dormant” (with five more days left to get your money out)? What constitutes equity and what constitutes debt?

Global valuations entail much more than sifting through papers, scanning documents or reading files. We have to “grasp” the geographical setting and the “industry landscape.” We have to “touch” the products, “sense” the standing and “feel” the quality of management. All this leads us to the same conclusion: wisdom sits in places.

7. Does Delaware “Matter”?¹²⁸

This leads us to our final question: Does it matter under what law a corporation is incorporated, be it Delaware, Liechtenstein, Mainland China, Nauru in the West Pacific or the Cook Islands? What about mere “brass plate” corporations? Robert Daines made the point that Delaware law “matters” because it tends to create better stock prices (“race to the top” instead of “race to the bottom”).¹²⁹ What about ethnic differences in cross cultural transactions that might cause higher transactions costs?¹³⁰ We may stretch the question even further by asking whether and to what effect appraisal rights matter and for whom? What about valuation methods? How and where are they to be taken into account? Should valuation methods be accounted for in the expected cash flows or in the

124. See Richard O. Zerbe, Jr. & C. Leigh Anderson, *Culture and Fairness in the Developments of Institutions in the California Gold Fields*, 61 J. OF ECON. HIST. 114 (2001).

125. Gary Minda, *Law & Literature at Century’s End*, 9 CARDOZO STUD. IN LAW & LITERATURE 245, 253 (1997).

126. Zerbe, *supra* note 119, at 138.

127. *Basic, Inc. v. Levinson*, 485 U.S. 224, 246 (1988).

128. For a new twist to the old conundrum (“against the threat of frivolous lawsuits”), see Henry J. Lischer, Jr., *Domestic Asset Protection Trusts: Pallbearers to Liability?*, 35 REAL PROP. PROB. & TR. J. 479 (2000); Lynn M. LoPucki, *The Death of Liability*, 106 YALE L.J. 1 (1996); Debra Baker, *Island Castaway*, 84 A.B.A.J. 54 (1998); Frank C. Razzano, *So You Want To Be an International Financial Center. . . . Are You Prepared to Spit in the Giant’s Eye?*, 28 SEC. REG. L.J. 326, 332 (2000).

129. Robert Daines, *Does Delaware Law Improve Firm Value?*, 62 J. FIN. ECON. 525, available at <http://jfe.rochester.edu/2k488.pdf>.

130. Zerbe, *supra* note 119, at 135.

risk factor? Are they part of the subset constituting themselves? Is valuation a “recursive branching process”?¹³¹ So far we have no answers to these questions of “advanced infinity mathematics.”

E. DOMESTIC APPRAISALS

1. *Outline*

The situation is different when we have to value a domestic corporation with corporate subsidiaries abroad. There the appraisal right arises from the domestic law and it is this law that tells us how the valuation must be conducted and how it must include the foreign subsidiaries. Domestic law and foreign law start to interact from a domestic basis.

2. *Point of Reference*

Under the older earnings approach, the point of reference would have been the domestic corporation. Yet, this changes dramatically with the discounted cash flow approach. Here the point of reference is the *shareholders'* perspective of the domestic corporation. And the emphasis is on *their* point of view. The question then becomes to what extent do the foreign subsidiaries contribute to the future cash flows for shareholders as the basis of valuation, and how do we capitalize them from the shareholders', not the corporation's, point of view, taking into account *their* market options.

3. *Wider Concept*

There is another vital difference from the valuation within a foreign appraisal situation. In the appraisal situation, the foreign law sets the standards for an objective, as opposed to an individualistic approach. Here, such standards do not apply as we deal with a domestic appraisal. We just have to ask what the value of the subsidiary's cash flow is for domestic shareholders. This does not mean that we neglect the foreign legal context altogether because it may affect the cash flow. If, for instance, a high degree of workers' codetermination exists abroad, this may reduce cash flow or increase the risk. The same may be true if the shares cannot or are not publicly traded (such as is the case for the German closed corporation, *Gesellschaft mit beschränkter Haftung*).

In addition, though the foreign appraisal rules are not technically applicable, they should not be discarded lightly. They could express an experience with foreign circumstances which cannot be matched by reading about them and without a deep empathy for foreign market conditions.

131. David G. Post & Michael B. Eisen, *How Long Is the Coastline of the Law? Thoughts on the Fractal Nature of Legal Systems*, 29 J. LEGAL STUD. 545, 552 (2000).

F. CORPORATE MARKETS

As the discount rate is such an important factor in any evaluation, the question then arises from what market to take it. Two views can be aired. We may refer to the capital market for the shares of the subsidiary and/or to the capital market for the shares of the domestic corporation.

1. Relevant Market

Where is the relevant market? From the shareholders' viewpoint, where is the place that creates most of the market value of the corporation? It is clear that the place of the corporation's registration cannot be the answer. Fictitious appearances cannot deliver a true and fair view when we look for market realities. The location of the "seat" of the headquarters might be a *prima facie* indicator. A competing place exists where most of the shares are traded.

2. Foreign Markets or Domestic Market?

The question does not end here. We must now decide whether to take the interest rate from the subsidiaries' shares' markets or from the domestic corporation's market. The question is vexing.

a. Standard Rules

This seems to be an easy matter. Under our standard rules, we have to evaluate the domestic corporation as a unit, because we want to find the cash flow producing power of the whole. When valuating a wholly domestic group, we would use a segmented valuation technique: "we individually consider each member of the set and then consolidate them into one sum."¹³² Should we follow the same approach in a trans-border situation? The answer without further elaboration is: no.

At first glance, the "no" looks surprising. Because here the subsidiaries might even have a more independent status as they are created by and exist under foreign laws. They are independent objects of valuations as within their own setting, embedded within a foreign market for their shares. Valuating them individually may bring the process closer to the objective. This may lead us to apply the discount rate from the subsidiaries' home markets as a reflection of the geographically favorable adapted experience.

b. Adaptations

However, doubts arise when we closely examine the matter. First, in a wholly domestic valuation, we apply one discount rate from a single market to all members of the group. We do not have to choose between different interests rates. As discount rates are the most important factors in evaluations, the concept gets another color when we use different dis-

132. *Rapid Am. Corp. v. Harris*, 603 A.2d 796, 798-99 (Del. 1992).

count rates.¹³³ Second, we do have to evaluate from the point of view of the domestic corporation's shareholders. The relevant market for their shares is probably also the market for their alternative investments. Third, these shareholders do not own shares in the foreign subsidiaries, nor is the foreign market their typical and, therefore, statistically relevant (macro justice!) field for alternative reinvestment. They invested their money in the domestic parent corporation and they receive their benefits in units of the dominant currency in this market. Fourth, this fits into our general idea that the cost of capital should be consistent with and expressed in the same currency as the cash flows, which we discount.¹³⁴

3. Result

Thus, it is the domestic market's outlook into the future that provides us with the "clue" for assessing it, and thereby gives us the discount rate. We follow this approach along the line from the risqué free interest rate to the risk premium including the betas. Therefore, in final analysis, we discount all expected cash flows, including those from abroad, with only the domestic discount rate.

G. LIQUIDATION VALUE

The liquidation value is of special importance for multi business corporations. "[C]onglomerates are often valued lower by the market than comparable pure play companies."¹³⁵ But the liquidation value balances this out. This value is the corporation's minimum value. Here again, the global setting raises particular questions. In liquidation all the assets of the corporation are assessed individually at their prospective sales price. Should we treat the foreign subsidiaries as individual assets at their going concern value (including goodwill) or should we look immediately to the individual assets of these corporations? We choose the first alternative, the break-up value.

Here again we must remember that we perform a liquidation analysis of the domestic corporation, *not* of the foreign subsidiaries. As a rule of thumb, we define the subsidiaries as a workable level of aggregation and value them accordingly as independent units.¹³⁶ It is here that the foreign markets' interest rates and risk premiums come into play, because our assumption is that the subsidiaries are individually sold on their respective markets.

H. RISKS OF BRINGING HOME

It is not enough to find the cash flows generated within the foreign subsidiary. We have to follow them all the way down through the conduit

133. For a more general view on corporate groups, see Damien Considines, *The Real Barriers to Regulation of Corporate Groups*, 3 ASIA PAC. L. REV. 37 (1994).

134. COPELAND, *supra* note 53, at 366.

135. *Id.* at 301.

136. *Id.* at 302.

of the domestic parent and from there to the domestic shareholders. We have to “transferry” them home, and this is—like every translation¹³⁷ (transferral)—a messy affair.¹³⁸ Additional wrinkles have to be considered.

1. Follow Up

These wrinkles include: translation of foreign currency accounts; tax burdens abroad and at home when bringing the foreign cash flow home; foreign investment risks; political risks; and currency risks. All of these risks pose a constant concern as the cash flow from the subsidiary is located abroad in a foreign political and economic environment and are expressed in a foreign currency. Their value to the domestic shareholder may be reduced if a country restricts the expatriation of cash flow.¹³⁹ The domestic value then “depends on the quantity and timing of the free cash flow (or cash equivalents) that can actually be paid out.”¹⁴⁰

2. Scenarios

As indicated above, these additional risks should be built into the cash flows through probability-weighted scenarios.¹⁴¹ They should *not* be included in the discount rate.¹⁴² The cash flow approach is analytically more disciplined and more explicit.¹⁴³ The issues can be discussed in detail. They are not hidden in a “black box” addition to the discount rate.¹⁴⁴ This also accepts the fact that country risks often are different from one subsidiary to the next. The danger of nationalizations, for instance, varies from country to country and from industry to industry. Experience tells us that it is wise not to overload the discount rate with too many considerations. It is better and more reliable to control when we adjust the expected cash flow by weighing the probability of various scenarios.¹⁴⁵

3. Global Financial Markets

But the ball does not rest here. Can we still refer to national financial markets? Copeland, Koller, and Murin answer that, in their opinion, “this makes intuitive sense.”¹⁴⁶ For “countries that are developed and reasonably integrated into the global capital market,” they favor a “worldwide

137. Margaret Davies, *Towards the Common Law? The Limits of Law and the Problem of Translation*, 2 ASIA PAC. L. REV. 65 (1993); Derek Roebuck, *Language, Law and Truth*, 1 ASIA PAC. L. REV. 51 (1992).

138. Minda, *supra* note 120, at 253.

139. COPELAND, *supra* note 53, at 346.

140. *Id.*

141. *Id.* at 345, 373. For a model, *see id.* at 384.

142. *Id.* at 382.

143. COPELAND, *supra* note 53, at 382.

144. *Id.* at 383.

145. *Id.* at 345.

146. *Id.* at 366.

risk premium based on the U.S. risk premium of 4.5 to 5 percent.”¹⁴⁷ Their argument is as follows:

Our reasoning is based on the globalization of capital markets If expected premiums were significantly different across countries (on a risk-adjusted basis), you would expect to see significant flows to countries with higher than average premiums and away from lower than average premiums. Such a movement would tend to re-equalize premiums.¹⁴⁸

At first glance, the answer sounds good for corporations that are traded, for instance, in the U.S. or Europe. It would be odd to attribute to such corporations different costs of capital. According to Copeland, Kopper, and Murrin, so far the premiums on stock market indexes over government bonds vary considerably. They even mention negative premiums “that don’t make any sense.”¹⁴⁹ But they argue “that these European markets have only recently opened up to the global market. Therefore, the historical data may not properly represent the current situation. More important is the argument that these market indexes do not represent large diversified portfolios.”¹⁵⁰

But this is more belief than actual “global” knowledge. So far the “beta” still has to find its global “location” before it is more than a “rule of thumb” and more than “global abracadabra.”

I. GLOBAL INDEX

An ideal solution would be a global market risk premium based on a global index measured over a long period of time. But so far, global indexes don’t go back very far. Company betas measured against these indexes are now available but they are measured in U.S. Dollars and they are affected by currency fluctuations.¹⁵¹ In addition, it is an open question whether and to what extent market risk premiums in different markets can be compared. We have some ideas about the equalization of cost of capital around the world but the outcome of the discussion is uncertain. The concluding remarks of Copeland, Koller, and Murrin are enlightening.

The cost of capital approach is also the same around the world, although estimation of some of the parameters (particularly market risk premium) can be controversial. We recommend using a common market risk premium around the world as the capital markets were substantially integrated by the end of the twentieth century.¹⁵²

The safe geographical haven has been introduced shortly before: “As we explained in Chapter 10, we recommend a 4.5 percent to 5 percent

147. *Id.*

148. COPELAND, *supra* note 53, at 366.

149. *Id.*

150. *Id.* at 367.

151. *Id.* at 368.

152. *Id.* at 371.

premium for the U.S. market."¹⁵³ This reminds us of an old "geographical" wisdom: "A bird in the hand is worth two in the bush!"

J. CYBERSPACE¹⁵⁴

1. *CyberCorporation*

So far we have not taken into account the effects of the Internet on global valuations.¹⁵⁵ We know little about the unforeseen images that might appear.¹⁵⁶ But the study of organizational innovations and values is just the afterthought of technological innovations. They will change the spiritual logistics and the cash flow of justice.¹⁵⁷ Technology-related issues are the most important issues facing markets and valuations.¹⁵⁸ Here, geographical allusions might move further into the background.

Three developments are of particular interest. First is the Napster-type internal communications lines and even more potent Gnutella-type peer-to-peer files. These make the whole body of a corporation and of a corporate group communicate with each other without going through a central server.¹⁵⁹ This speculation is not moot. Certainly, Napster, like peer-to-peer setups, were all the rage of 2000.¹⁶⁰ But the bursting of the Internet bubble does not affect its use as an intranet communication set up for corporations to share experience and intelligence and to reduce the need for a central "meeting place." Where, then, is the center of activity of such corporation? What law governs the appraisal? Second, CyberCorporations¹⁶¹ that live only, or almost only, in the Internet push the problem one step further. Third, International Accounting Standards, or Generally Accepted Accounting Standards have become global. They no longer constitute semiotic borders for markets. Also, currencies no

153. *Id.* at 368.

154. HOWARD M. FRIEDMAN, *INTELLIGENT AGENTS AND FUTURE SHOCK: REGULATORY CHALLENGES OF THE INTERNET* (1998); Robert Norman Sobol, *Intelligent Agents and Futures Shock: Regulatory Challenges for the Internet Securities Regulation in Cyberspace*, 25 J. CORP. L. 103 (1999). See also F. LAWRENCE STREET & MARK P. GRANT, *LAW OF THE INTERNET* (Lexis Publishing 2001); LILIAN EDWARDS & CHARLOTTE WAELDE, *LAW AND THE INTERNET* (2000). For problems of valuation in general, see COPELAND, *supra* note 53, at 315.

155. Robert Norman Sobol, *The Benefit of the Internet: The World Wide Web and the Securities Law Doctrine of Truth-on-the-Market*, 25 J. CORP. L. 85 (1999).

156. For past experiences, see ROBERT BOYD & PETER J. RICHESON, *CULTURE AND THE EVOLUTIONARY PROCESS* (Chicago 1985); Judy S. Kraus, *Legal Design and the Evolution of Commercial Norms*, 26 J. LEGAL STUD. 377 (1997); Frederick Schauer & Virginia J. Wise, *Nonlegal Information and the Delegalization of Law*, 29 J. LEGAL STUD. 495 (2000).

157. It is a quaint coincidence that "in God we trust" appears on all one-dollar bills. Who is the "God" today? Also consider: "In God we trust, all others we monitor."

158. Cf. Steven M. H. Wallman, *Technology and Our Markets: Time to Decimalize* (1996), quoted from Paul D. Cohen, *Securities Trading Via the Internet*, 4 STAN. J. L. BUS. & FIN. 1 (1999).

159. Amy Kover, *Napster: The Hot Idea of the Year*, FORTUNE, June 26, 2000, at 128; John Gibeaut, *Facing the Music*, A.B.A.J., Oct. 2000, at 36.

160. Lee Gomes, *P-to-P, B-to-B R.I.P.? Napster-Like Peer-to-Peer Setups Were All the Rage of 2000; Now Many Morph or Fold*, WALL ST. J. Apr. 4, 2001, at B1.

161. Grossfeld, *supra* note 21.

longer identify markets as narrowly as before.¹⁶² We have Dollar, Yen, and Euro zones, but none of them has the same identifying strength that national currencies had before.

2. *CyberTrade*¹⁶³

a. New Models

New semiotics and new logistics create and define new markets. Internet-based trading systems of a globalized NASDAQ-type speed up the delocalization of markets. Several companies have launched their own models that fall into two main categories: Internet-based bulletin boards and Internet-based crossing systems.¹⁶⁴ Bulletin boards provide a place where sellers and buyers of the shares meet to privately negotiate a trade. Crossing systems play a more active role. They collect trading interests from sellers and buyers and match them through a computerized algorithm.¹⁶⁵ Add to this the “islands castaway” like Cook Island or Niue whose “international business companies,” incorporated in “Chinese, Cyrillic, or any other language,” are marketed over the Internet.¹⁶⁶

b. New Logistics

The Internet is the great creator of new semiotics and new logistics, of digital signs and of virtual markets.¹⁶⁷ Semiotics defines markets more than they did ever before.¹⁶⁸ Semiotics defining markets have often been overlooked, though the idea is not new. Consider that the term “pecuniary” is derived from the Latin “pecus,” which means cattle, and that the word “capital” is from the Latin word “caput,” which means head or count of heads of cattle. The history of money and banking tells us a similar story. Money provides a standard of commensurability for unlike things, facilitates wider exchanges and contributes to social bonding. All modern banking originated in “exchanges” of signs or money. Banks either exchanged one kind of coin for another or they exchanged bills in which money was received in one place in order to be repaid in another place and in a different kind of currency.¹⁶⁹ They built bridges between

162. Thomas Baxter, *Recent Sovereign Debt Litigation and its Adverse Impact on Payments Systems and Central Banks*, 35 INT'L LAW. (forthcoming 2001).

163. Paul D. Cohen, *Securities Trading Via the Internet*, 4 STAN. J. L. BUS. & FIN. 1 (1999).

164. For details, see *id.* at 17, 22.

165. *Id.*

166. Razzano, *supra* note 123, at 331 n.15; U.S. Department of State, Bureau for International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report*, 1999, “Niue” (Mar. 2000), available at http://www.state.gov/www/global/narcotics_law/1999_narc_report/ml_country_99.html.

167. Axel Horstmann, *Interkulturelle Hermeneutik: Eine neue Theorie des Verstehens?*, 47 DEUTSCHE ZEITSCHRIFT FÜR PHILOSOPHIE 427 (1999).

168. For legal semiotics in general, see Kevelson, *supra* note 6.

169. RAYMOND DE ROOVER, WHAT IS DRY EXCHANGE?, in BUSINESS, BANKING AND ECONOMIC THOUGHT IN LATE MEDIEVAL AND EARLY MODERN EUROPE: SELECTED STUDIES OF RAYMOND DE ROOVER 183 (Julius Kirshner ed., 1974); RAYMOND DE ROOVER, THE RISE AND DECLINE OF THE MEDICI BANK (1966).

markets defined by different semiotic networks and thus created wider markets.

c. Markets by Semiotics

Robin Paul Malloy has again taken up this idea.¹⁷⁰ For him, market choice is an interpretative process and is, therefore, a “relational and grounded experience.”¹⁷¹ The semiotic structure channels creative urges. They are conduits for communication. Thus, they have a substantive influence on creativity and on the process of sustainable wealth.¹⁷² They make patterns appear from joint hopes and joint experiences—though we do not know how.¹⁷³ Markets are “sign systems” that give meaning and value to human action while making the exchange process comprehensible.¹⁷⁴ Signs create cognition and cognition creates markets. Interests and compound interests are a perfect example for this proposition.

d. Markets by Geography

But if this is so, does wisdom still sit in places or does it sit in semiotics? Is the Internet a “place?”¹⁷⁵ Are we entering a “nomos” without a “narrative?”¹⁷⁶ Has the whole world become our place?¹⁷⁷ I am hesitant to answer “yes.” Certainly, the Internet brings about a kind of convergent evolution. But when we talk about interest rates, we should not become too global even in the Internet era. We take as a basis for the discount rate a virtually risk free interest rate within a given currency, that is to say only an interest that is paid by strong governments (for example, U.S. government bonds), and by a few triple A rated corporations. Their strength will continue to be judged by “location, location, and location!” “Adam” remains “taken from the ground.” To know who we are, we have to have a place from where to start¹⁷⁸ and space is and remains the “first of all things.”¹⁷⁹ The whereabouts continue to be decisive. Patterns appear from joint experiences and joint hopes. They will continue to “sit in places.”

170. ROBIN PAUL MALLOY, *LAW AND MARKET ECONOMY: REINTERPRETING THE VALUES OF LAW AND ECONOMICS* (2000).

171. *Id.* at 16.

172. *Id.* at 29.

173. *But see* Zerbe & Anderson, *supra* note 118.

174. MALLOY, *supra* note 165, at 39.

175. *Cf.* Lawrence Lessig, *The Zones of Cyberspace*, 48 *STAN. L. REV.* 1403 (1996).

176. *See* Robert M. Cover, *The Supreme Court 1982 Term Foreword: Nomos and Narrative*, 97 *HARV. L. REV.* 4 (1983); George A. Martinez, *Philosophical Considerations and the Use of Narrative in Law*, 30 *RUTGERS L.J.* 683 (1999); Jamison Wilcox, *Borrowing Experience; Using Reflective Lawyer Narratives in Teaching*, 50 *J. LEGAL EDUC.* 213 (2000); James Seaton, *Law and Literature: Works, Criticism, and Theory*, 11 *YALE J.L. & HUMAN.* 479 (1999); Julie Stones Peter, *Review Essay*, 9 *CARDOZO STUD. IN LAW & LITERATURE* 759 (1997).

177. For the discussion, *see* David R. Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 *STAN. L. REV.* 1367, 1378 (1996).

178. KEITH H. BASSO, *WISDOM SITS IN PLACES* 105 (1996); KEITH H. BASSO, *WESTERN APACHE LANGUAGE AND CULTURE* (1990).

179. BASSO, *supra* note 178, at 3.

K. SEMIOTIC IMPACT

1. *Mapping the World*

This is not only a discussion of how geography and semiotics meet and interact with each other. Our walk into *international* aspects of corporate finance led us into a world between lawyers and accountants, stories and signs, letters and numerals, between past, present and future. Writing letters and writing numerals is like mapmaking for our intellectual and emotional orientation. Particularly in law, we find that we are inextricably linked and bound to the social organization of semiotics that map¹⁸⁰ the geographical and manmade environment.¹⁸¹ Geography and semiotics are closely intertwined. They interact with each other like a double helix. We see the world from this dynamic background and we follow the maps they draw for us. We constantly analyze and reshuffle semiotics as a way to discover, as a means to attack and defend, and as a symbol for tender love.

2. *Dominant Semiotics*

Now lawyers, as members of the reading and writing cast, are confronted with a world where they do not monopolize the *dominant* semiotic system any longer. We have to realize that our written word is of less importance in corporate governance than we make ourselves and others believe. All of a sudden we become aware of the “social nature of literacy,” and that literacy is a function of a particular semiotic system, be it letters or numerals.

So far letter literacy and letter cognition are central to our Western societies. We are all classified as talented or untalented against the social practice of reading and writing, and this is true for lawyers in particular. Mathematics is not of our business, but all of a sudden this semiotic system is catching up. It establishes a boundary, both real and imaginary between the “lawyers’” identity and “the others’” identity.

L. KEEPING OUR TURFS

1. *Digital World*

Therefore, my subject also has to do with the “turfs” that lawyers have to protect in the interest of their clients, such as shareholders. Law professors feel the same duty in the interest of job opportunities for their students. The Internet is a digital world and “digital” is derived from “digit” and from the Latin “digitus” which means “finger.” “Digital,” therefore, refers to finger counting, which refers to numbers. Numbers are the name of the game. They form the world of Cyberspace. They

180. Cf. William Twining, *Mapping Law*, 50 N. IR. LEGAL Q. 12 (1999).

181. See Kevin R. Johnson & George A. Martinez, *Discrimination by Proxy: The Case of Proposition 227 and the Ban on Bilingual Education*, 33 U.C. DAVIS L. REV. 1227 (2000).

evoke the myth of mathematics and the myth of an abstract and eternal truth that goes with it.

2. *Numbers over Letters*

In the Western world we are not content until we count everything. Counting is a daily ritual that maintains our connection to a world in which numbers “count” (the active power of signs!): “Life By the Numbers.”¹⁸² The switching from letter exchanges like “M^cKnight” to seven-digit numbers on our phones and the ZIP code replacing city names indicate this clearly. They mark an irreversible step in the ascendancy of numbers over letters. Nobody calls this a “numerical neurosis” anymore. Accordingly, lawyers should not remain “like the numberless flowers that cannot number.” “It is to-day in which we live¹⁸³”, and today needs new semiotic techniques.

3. *Seduction*

Numbers “look” so precise, so reliable, and even more so in a digital world that already fully “believes” in numbers. The somewhat supernatural aura of mathematics, appearing like science to judges, lends authority to its results and leads to an augmentation of its answers. It suggests a strength that is added behind the scene and reaches out to higher forces in order to show complete control.¹⁸⁴ It “naturalizes” the result as inevitable.¹⁸⁵

4. *Lessons from Poetry*

W.H. Auden tells us:

The Kingdom of Number is all boundaries
Which may be beautiful and must be true. . .

But he ends:

True, between faces almost any number
Might come in handy, and One is always real;
But which could any face call good, for calling
Infinity a number does not make it one.¹⁸⁶

We are too often intimidated into silence unaware of the overall limitations of mathematics as a language:¹⁸⁷

182. KEITH DEVLIN, *LIFE BY THE NUMBERS* (1998).

183. W.H. AUDEN, *ANOTHER TIME* (1940).

184. Calum Carmichael, *The Ten Commandments: In What Sense Religious?*, in *LAW AND RELIGION* (Rex J. Ahdar ed., 2000); see also Walter Weyrauch, *Law as Mask—Legal Ritual and Relevance*, 66 CAL. L. REV. 699 (1978); JOHN T. NOONAN, *PERSONS AND MASKS OF THE LAW: CARDOZO, HOLMES, JEFFERSON, AND WHYTE AS MAKERS OF THE MASKS* (1976); James Boyd White, *Reading Texts, Reading Traditions: African Masks and American Law*, 12 YALE J.L. & HUMAN. 117 (2000).

185. Douglas Litowitz, *Reification in Law and Legal Theory*, 9 S. CAL. INTERDISC. L.J. 401 (2000)

186. W.H. AUDEN, *NUMBERS AND FACES* (1951)

187. MICHEL GUILLEN, *BRIDGES TO INFINITY* 5 (1983).

A sentence uttered makes a world appear
 Where all things happen as it says to do;
 We doubt the speaker, not the tongue we hear:
 Words have no word for words that are not true.¹⁸⁸

We have to be cautious not to be seduced to a somewhat “magically” and overly ordered corporate world and to be tempted to achieve it through mathematics.

5. *Global Competition*

The answer, however, is more difficult to find than it appears to comparatists at first glance. The difficulty is not so much that comparatists have largely missed the “law and economics” approach as they are catching up in that field.¹⁸⁹ But they still prefer to delve in the Coase theorem; not in the problems we are confronted with here, using a different economic language in numbers that might outflank word-addicted lawyers.¹⁹⁰ We should always remember that our mental capacity for numbers precedes our mental capacity for letters, as every child would tell you.¹⁹¹

This competing semiotic system appears to be particularly strong and trustworthy in international valuations.¹⁹² The power of language (this time mathematics) creates a perception of reality (social construction) far beyond our domestic experience. Numbers pretend to give us a “domestic” feeling of security, even abroad when we are lost in a sea of foreign signs, which we do not understand. Mathematics is the only “language” shared by all human beings, regardless of place, race, religion or gender. It uses symbols and words that seem to provide a universal conceptual framework for seeing and understanding the world. Counting is the same process across cultures. By the same token, numerals have a wider global penetration. The same numerals are understood as the same numbers everywhere, and everywhere 284 means $(2 \times 100) + (8 \times 10) + (4 \times 1)$, posing no problems of translation. Mathematics show our ability to work with abstract concepts and to understand, to order, and to control what the eye cannot see—for instance foreign corporations. At least the numbers carry the same meaning. Alas! If it only were the same! In reality they are often “faux amis” in the truest sense of the words, as already indicated.

188. W.H. AUDEN, *WORDS* (1951).

189. UGO MATTEI, *COMPARATIVE LAW AND ECONOMICS* 144 (1998).

190. Jack A. Hiller & Bernhard Grossfeld, *Comparative Legal Semiotics and the Divided Mind: Are We Educating Halfbrained Lawyers*, 50 *AM. J. COMP. L.* (forthcoming 2002).

191. TOM KORNER, *THE PLEASURES OF COUNTING* (1996); KEITH DEVLIN, *THE MATH GENE: HOW MATHEMATICAL THINKING EVOLVED AND WHY NUMBERS ARE LIKE GOSSIP* ((2000); STEVEN PINKER, *THE LANGUAGE INSTINCT* (1994).

192. Cf. Ira J. Hadnot, *Why Numbers Count; Census Time Brings out Fascination with Mathematics*, *DALLAS MORNING NEWS*, Mar. 25, 2001, at J1.

M. FIGHTING "ILLITERACY"¹⁹³1. *Lawyers' Job*

But it continues to be the lawyers' job to keep pictures, numbers, and letters in balance, and the balanced "scales" are the symbol for justice in our Western cultures. We continue to need people that can "figure it out" (to display it in visionary form) or to "sort it out" (from Latin "sort, sortis," meaning chance, luck, to obtain by lot, by lottery).¹⁹⁴ We have to "comprehend," a metaphor that tells us we have to grasp reality. Understanding is grasping. The two phrases "to figure out" and "to sort out" are both precise. They tell us that evaluation is much more than letters and numbers. Our day-to-day metaphorical language knows more than we do.¹⁹⁵

Even in valuation decisions, we are not autonomous, only rational actors.¹⁹⁶ Lawyers beware! But lawyers and law will not be able to compete if they continue to be "illiterates" in this field, barely offering "noble platitudes" or "academic graffiti."¹⁹⁷ But:

What we have not named
or beheld as a symbol
escapes our notice.¹⁹⁸

2. *"To Think as a Lawyer"*

The old saying is that the law sharpens the mind by narrowing it. This happens sometimes deliberately ("to think as a lawyer"), but most times inadvertently. We are often severely limited in kind and try to banish as irrelevant many insights that are outside our letter addicted world of the (letters) printing press.¹⁹⁹ Certainly, literacy (in letters) lies at the foundation of our justice system.²⁰⁰ But we are on the verge of having to pay a high price for our letter centered world. We become mute within a newly emerging dominant structure. So muted, that we do not form part of the new group of corporate know-how holders that have a better chance to form the dominant ideology. To discover which of their statements is true and which is false "it is no use studying our handwriting."²⁰¹

193. LINDA KING, *ROOTS OF IDENTITY* (1994); JOSEPH G. JORGENSEN, *SALISH LANGUAGE AND CULTURE* (1969).

194. The Oxford English Dictionary gives an example from 1582: ". . . by drawcut lottery sorteth." Cf. James D. Miller, *Using Lotteries to Expand the Range of Litigation Settlements*, 26 J. OF LEGAL STUD. 69 (1997).

195. GEORGE LAKOFF & MARK JOHNSON, *PHILOSOPHY IN THE FLESH* 125 (1999).

196. *Id.* at 536.

197. W.H. AUDEN, *SHORTS* (circa 1929-1932).

198. W.H. AUDEN, *I AM NOT A CAMERA* (1969).

199. PAUL HOGAN, *GREAT RIVER* 187 (1994) ("[A]nd all because a complicated machine held together many rows of reversed little metal letters and pressed them into damp paper again and again.").

200. Mary Sarah Bilder, *The Lost Lawyers: Early American Legal Literates and Transatlantic Legal Culture*, 11 YALE L.J. & HUMAN. 47, 55 (1999).

201. Cf. W.H. AUDEN, *DICHTUNG UND WAHRHEIT IX* (1959).

3. *Junior Partners?*

As it stands now, lawyers often act as “illiterates” in the world of accounting and valuation. They tumble from word to word and the “corporate city” becomes to them a labyrinth of numerical signs to be “deciphered” (“de-numbered”) if the “illiterates” (“in-numericals”) want to move from one point to another. If we stay “illiterate” we will lose our voice in the discussion of corporate governance and all concerns about multidisciplinary practices will not protect us against becoming junior partners.²⁰² That is rightly so; whoever knows only one language in corporate governance doesn’t even know his own.

Lawyers should not continue to be illiterates in the “new linguistics” of accounting and mathematics. Let’s stay on top of it! It can be done. The present horizon is nothing more than the limit of our sight.

4. *Full Brained Approach*

This does not mean that—under the impact of mathematical enthusiasm—we should drive our abstract approaches even further than we do anyhow.²⁰³ The point is that even when entering a new field of semiotics, we do not forget the “sensitive approaches,”²⁰⁴ that we observe landscapes, listen to stories and catch the pictures, the experiences, and the “ways of life” that are evoked and veiled by the signs.²⁰⁵

Geography and signs, constantly interacting with each other, provide the landscape or “DNA-code” for what we feel as being “in order.”²⁰⁶ But we cannot use them in isolation. They have to be matched by all our senses. Our senses are made to cope with chaos, to enable us to “balance” over the “roaring, merciless sea” as on a “highway.” Our senses guide us *not* to fall into letters and numbers as “magical” traps that pretend to give even more security. There is no more security—neither in life, nor in financial statements, nor in valuations.

Valuation is much more than to “despell” and to “decipher” letters and numbers. The “*mos mathematicorum*” (mathematical custom) of the Middle Ages²⁰⁷ and the “*mos geometricus*” of the era of enlightenment²⁰⁸ are no longer our “*Weltanschauung*,” no longer the order of the day, of *our* day.

202. Bernhard Grossfeld, *Lawyers and Accountants: A Semiotic Competition*, 36 WAKE FOREST L. REV. 167 (2001).

203. Hiller & Grossfeld, *supra* note 190.

204. Cf. Rabanus Maurus (776-856, Fulda, “*praeceptor Germaniae*” and his hymn “*Veni Creator Spiritus*,” “*Accende lucem sensibus*.”) equals “give light to our senses.”

205. *Hebrews* 10:1: “*Umbram enim habet lex*”; Cf. T.S. Eliot: There is always a shadow. (could not find cite)

206. John Charles Kunich, *Mother Frankenstein, Doctor Nature, and the Environmental Law of Genetic Engineering*, 74 S. CAL. L. REV. 807 (2001).

207. RICHARD SOUTHERN, *THE MAKING OF THE MIDDLE AGES* (1993).

208. See generally PETER GAY, *THE ENLIGHTENMENT: AN INTERPRETATION* 69 (Alfred A. Knopf ed., 1967).

O. LIMITS

The interaction of geography and signs, of law and mathematics, of lawyers and accountants tell us that valuation really is an "art" that has to be approached with caution and an open mind. We have to move from geography to signs and from signs back to geography. There are no simple formulas available as a substitute for using all our senses on these non-linear paths. We have to tell and to hear stories far beyond mathematics as "just stories" that take us to the "other's" home as a guest and bring him into our home.²⁰⁹ But even then:

The will is infinite
and the execution confined,
The desire is boundless
and the act a slave to limit.²¹⁰

P. SUMMING UP

It might have looked difficult for you to bring "global," "valuation," "geography," and "semiotics" together into a straight line. I wouldn't have dared to do it were it not for Joseph W. McKnight. In his honor I would like to return to a piece of poetry that meets my professional dream of justice for human beings, the children of earth and heaven, somewhere between geography and signs:

The eyes of Texas are upon you
All the livelong day.
The eyes of Texas are upon you,
You cannot get away!

. . .
Till Gabriel blows his horn.²¹¹

Joe was my teacher at an important changing point for my studies in comparative law and international corporate finance. An inscription on a bench on the SMU campus tells us that a teacher "never knows where his lessons stop." Today I wanted to show into what relatively uncharted fields or waters his ideas pushed and guided me. May the "eyes of Texas" continue to be "upon" him! Thank you, Joe! Thanks to Southern Methodist University!

209. Milner Ball, *Just Stories*, 12 *CARDOZO STUD. IN LAW & LITERATURE* 37 (2000).

210. WILLIAM SHAKESPEARE, *TROILUS AND CRESSIDA* act 3, sc. 2.

211. John Sinclair, *The Eyes of Texas*, Official University of Texas Alma Mater (1903).