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ARTICLES

MAINTAINING UNIFORMITY IN INTERNATIONAL UNIFORM LAW VIA AUTONOMOUS INTERPRETATION: SOFTWARE CONTRACTS AND THE CISG

Frank Diedrich†

I. INTRODUCTION

International Uniform Law is a good thing in theory: The attainment of legal certainty via well-balanced subsidiary rules made for international contracts and the avoidance of weak legal relationships are among its major goals.¹ The goal of the United Nations Convention on Contracts for the International Sale of Goods (CISG),² as stated in its preamble,³ is to support the international trade and exchange of goods. However, International Uniform Law, including the CISG, lacks a common legal theory and practice upon which judges and practitioners

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¹ See KEGEL, *INTERNATIONALES PRIVATRECHT* 112 (7th ed. 1995) for a discussion of the international uniform application of private law as the supreme goal of both unified and non-unified private international law.

² United Nations Convention on Contracts for the International Sale of Goods, *opened for signature* Apr. 11, 1980, U.N. Doc. A/CONF.97/18, Annex I (1980), *reprinted in* S. TREATY DOC. NO. 98-9, 98th Cong., 1st Sess. 22 (1983), *Official Records*, U.N. Conference on Contracts for the International Sale of Goods 178-90, U.N. Doc. A/CONF.97/19(1981) and 19 I.L.M. 668 (1980) [hereinafter CISG]. In force since January 1, 1988, the CISG has been applicable in the Federal Republic of Germany since January 1, 1991, 568 BGBl. I, II (1989). It has been applicable in the former German Democratic Republic since March 1, 1990, GBl. DDR II 65 (1989). Equally authentic are the English, French, Spanish, Russian, Arabic and Chinese text of the CISG. The English and French text in connection with the official German translation can, e.g., be found in HERBER & CZERWENKA, *INTERNATIONALES KAUFRECHT* 475 (1991).

³ See HERBER & CZERWENKA, *supra* note 2, at 417-18.

can rely.⁴ This results in the well-known "homeward-trend" in favor of the *lex fori*⁵ when international lawyers interpret contractual language.⁶ Such an interpretation puts a uniform application of International Uniform Law at risk. With every new ratification, it becomes more unlikely that an international court will be established to ensure the uniform interpretation and application of the CISG and other uniform laws in the contracting states. Problems of binding force, seat and procedure may be too great to overcome in interpreting the CISG.

The globalization of business has resulted in transborder data exchanges that have made the linkage of communication systems necessary. One may even regard such linkages as a "second industrial revolution"⁷ with computer software sent from one continent to another by wire or even satellite. The parties to these international transactions are most likely unaware that the law governing them is underdeveloped. Legal certainty will not be improved if the rising number of international contracts for the transfer of software are reviewed on a case-by-case basis using only one body of law for interpretation.⁸

Most international software contracts consist of the transfer of a ready-to-install computer program (either standard or bespoke software) in exchange for a sum of money. Such con-

⁴ See Merryman, *On the Convergence and Divergence of the Civil Law and the Common law*, 17 STAN. J. INT'L L. 357, 365 (1981).

⁵ *Lex fori* refers to "the law of the forum or court; that is, the positive law of the state, country, or jurisdiction of whose judicial system the court where the suit is brought or remedy sought is an integral part." BLACK'S LAW DICTIONARY 910 (6th ed. 1990).

⁶ For a discussion of the problem of the "homeward trend" under non-unified conflict of law rules, see KEGEL, *supra* note 1, at 114-15.

⁷ The "Industrial Revolution" was "a rapid and major change in an economy . . . marked by the general introduction of power-driven machinery or by an important change in the prevailing types and methods of use of such machines." WEBSTER'S NINTH COLLEGIATE DICTIONARY 617 (1987).

⁸ For an American point of view on this issue, see Primak, *Computer Software: Should the U.N. Convention of Contracts for the International Sale of Goods Apply? A Contextual Approach to the Question*, 9 COMPUTER/L.J. 197 (1991); Fakes, *The Application of the United Convention on Contracts for the International Sale of Goods to Computer, Software and Database Transactions*, 3 SOFTWARE L.J. 559 (1990). For a German point of view, see MÜGLICH, *SOFTWAREÜBERLASUNG NACH US-AMERIKANISCHEM VORBILD ZUR ÜBERTRAGBARKEIT DES UCC IN DAS DEUTSCHE RECHT*, 648-53 CR (1991).

tracts have on their face the features of a sale of goods.⁹ This characterization is also in accordance with a comparative law classification,¹⁰ since within the largest legal systems in the world, a contract under which the main mutual obligations of the parties consist of the transfer of goods for payment is unanimously characterized as a sales contract. The CISG then has potential applicability. If the CISG achieves acceptance as a "world sales code," then its application to international software contracts would result in certainty as to the applicable law.

Moreover, the CISG provides a set of rules in six languages that are not only modern, but closely adhere to the needs of international trade. These rules provide an ideal compromise, and an alternative to interpreting contracts using only one party's local or domestic law. Furthermore, with the simplified, clear norms of the CISG governing the contract, there is no danger of a "parachute drop into darkness" as often happens when parties choose the unknown law of a third country as a neutral compromise. Also, the applicability of the CISG diminishes contractual difficulties arising over the choice of subsidiary applicable law.¹¹

Nevertheless, it remains questionable whether software can be regarded as a "good" under the CISG. This leads to problems with interpreting the CISG according to its preamble and Article 7(1) that requires an autonomous uniform interpretation.¹² This article will discuss the applicability of the CISG to software contracts and will address the problems involved in maintaining uniformity among contracting states in international sales law.

⁹ A contract of sale is "a contract by which one of the contracting parties, called the "seller," enters into an obligation to the other to cause him to have freely, by a title of proprietor, a thing, for the price of a certain sum of money, which the other contracting party, called the "buyer," on his part obliges himself to pay. BLACKS LAW DICTIONARY 326 (6th ed. 1990).

¹⁰ Kegel discusses the theory that recognizes the different methods of classification in other systems of law. Such methods seek an intermediate solution thereby avoiding a *lex fori* solution. See KEGEL, *supra* note 1, at 251-53.

¹¹ The acceleration of entering into a contract because of the opportunity to choose the CISG as a neutral compromise is also expressly mentioned as an advantage and goal in the Secretariat's Commentary to the "New York Draft of 1978." See HONNOLD, DOCUMENTARY HISTORY OF THE UNIFORM LAW FOR INTERNATIONAL SALES 404, 405 (1989).

¹² CISG, *supra* note 2, at art. 7(1).

II. GENERAL PREREQUISITES OF APPLICATION

Before addressing the question of whether contracts for the transfer of software fall within the sphere of application of the CISG, the following section will address the general sphere of application of the CISG.

A. *Spatial Prerequisites for Application: The Internationality of Sales Contracts*

The spatial application of the CISG described in article 1¹³ is determined either autonomously or with the help of the non-unified rules of private international law of the forum state. In each case, an objective, international element is required.¹⁴ In an autonomous determination of the spatial application under article 1(a),¹⁵ the parties must have their place of business or habitual residence, as defined in article 10(b),¹⁶ in different states at the time of entering into the sales contract.¹⁷ Alternatively, the CISG spatially applies according to article 1(b) if the non-unified rules of private international law require the law of a contracting state to govern the contract.¹⁸ This presupposes that such state has not excluded an expanded sphere of application by reservation under article 95;¹⁹ even if the CISG applies, the parties to the contract can choose the applicable law.²⁰ The allowance stems from the universally recognized principle of party autonomy under non-unified private international law,

¹³ CISG, *supra* note 2, at art. 1.

¹⁴ CISG, *supra* note 2, at art. 1.

¹⁵ CISG, *supra* note 2, at art. 1(a).

¹⁶ CISG, *supra* note 2, at art. 10(b).

¹⁷ CISG, *supra* note 2, at art. 1(b).

¹⁸ CISG, *supra* note 2, at art. 1(b).

¹⁹ Such a reservation under the Convention has been made by China, the former CSFR and the U.S. Along with its ratification, the Federal Republic of Germany has made a partial reservation that is not provided for in the Convention itself. This reservation states that the CISG may not be applied if the rules of private international law, according to article 1(b) of the application of the law of a contracting state, made the reservation under article 95. See REINHART, UN-KAUFRECHT (1991); CISG *supra* note 2, at art. 1. Nevertheless, Herber and Czerwenka, regard this partial reservation only as a nonbinding rule for interpretation, since it is unclear whether such a reservation is valid under public international law. One should not forget that this partial reservation is just a "minus" in comparison to the complete reservation made possible by article 95 and therefore may not be admissible. See HERBER & CZERWENKA, *supra* note 2.

²⁰ CISG, *supra* note 2, at art. 95.

and in turn results in the supremacy of the parties' choice of law.²¹

Accordingly, under article 6,²² parties can derogate from the CISG but the parties have to state such a derogation explicitly and precisely because of the wide sphere of application described in article 1(b).²³ The "international legislator," i.e., the members of the 1980 Diplomatic Conference in Vienna, refused in contrast to the members of the 1964 Hague Sales Conventions, to add a cumulative, objective, trans-border element.²⁴ Such an objective international element may have included contractual formation from two different states, or the actual export of goods for achieving a wide spatial sphere of application.²⁵

B. *Personal Prerequisites of Application*

Generally, the CISG does not differentiate between merchants and other persons.²⁶ According to article 2(a), only contracts for the sale of goods intended for the personal use of the seller are excluded.²⁷ The status of the parties is determined at the conclusion of the contract by objective standards.²⁸ This exception applies based on the intended use in a particular case, (a subjective approach), and not because of any personal characteristics of the parties.²⁹ If a private person sells goods to

²¹ Specifically, the "[g]eneral principle of law recognized by civilized nations." See VON BAR, *INTERNATIONALES PRIVATRECHT* VOL. 2, 412 (1991); with regard to English private international law, this basic rule can be found in *Gienar v. Meyer* 2 Hy Bl 603 (1796); see also, CHESIRE & NORTH, *PRIVATE INTERNATIONAL LAW* 476 (12th ed.). 1992).

²² CISG, *supra* note 2, at art. 6.

²³ As to the prerequisite wording for a proper derogation or derivative clause, and its intrinsic difficulties, see VÉKÁS, *ZUM PERSÖNLICHEN UND RÄUMLICHEN ANWENDUNGSBEREICH DES UN-EINHEITSKAUFRECHTS*, IPRax 342, 346 (1987).

²⁴ See generally CISG *supra* note 2.

²⁵ See CZERWENKA, *RECHTSANWENDUNGSPROBLEME IM INTERNATIONALEN KAUFRECHT* 129 (1988); VON CAEMMERER & SCHLECHTRIEM-HERBER, *supra* note 1, at art. 1, nos. 3, 7; HERBER & CZERWENKA, *supra* note 2, at art. 1, no. 9.

²⁶ The problem of an international, uniform classification of a person as a "merchant," i.e., professional salesperson, was deliberately avoided. See Vékás, *supra* note 24, at 342.

²⁷ Specifically, "personal, family or household use." CISG *supra* note 2, at art. 2(a).

²⁸ CISG, *supra* note 2, at art. 6.

²⁹ See CZERWENKA, *supra* note 26, at 128. See also VON CAEMMERER & SCHLECHTRIEM-HERBER, *supra* note 26 at art. 2, nos. 5, 9.

a merchant or to another private person for resale the CISG then becomes applicable. For CISG applicability to international software contracts, the Convention's substantive sphere of application is most decisive.

C. *Substantive Prerequisites of Application*

Article 1(1) of the CISG explicitly limits the scope of the Convention's substantive application to contracts for the sale of goods.³⁰ However, no definition can be found in the CISG for either the essential elements of a sales contract, or for its main objects, namely, the "goods/marchandises" (the German Waren). Nevertheless, it is possible indirectly to extract the central elements of the sales contract from two of the Convention's norms.

According to article 30, the seller's main obligation is to deliver and transfer property in the goods, including all relevant documents.³¹ The buyer's main obligation under the sales contract is stated in article 53 and consists of tendering payment and taking delivery of the goods.³² Any transaction may be subsumed under the notion of a sales contract if the mutual obligations of the parties consist on the one hand, of the delivery of goods, including the transfer of property in them, and on the other hand, the payment of the price for the goods.³³

A legal definition of "goods," however, cannot be indirectly inferred from a systematic reference to the wording of other

³⁰ CISG, *supra* note 2, at art. 1.

³¹ CISG, *supra* note 2, at art. 30.

³² CISG, *supra* note 2, at art. 53.

³³ This definition of a sales contract is also consistent with the ideas of the UNCITRAL Working Group of 1970. See HONNOLD, *supra* note 12, at 63. Interestingly, the buyer's obligation to take delivery of the goods amounts under article 53 amounts to a main contractual obligation whereas under § 433 I BGB, it is only an ancillary obligation which creates unnecessary problems as to the correct contractual remedy under German domestic sales law if the buyer fails or refuses to take delivery. It is nevertheless unclear and unsettled whether a sales contract according to the CISG presupposes the payment of the price in money or whether it could be paid at least in part by barter. It should be safe to conclude from the Convention's main objective to support international trade by a set of uncomplicated uniform norms, that the forms of payment are deliberately and entirely left to the parties' discretion as being part of their basic freedom of contract-party autonomy. See HERBER & CZERWENKA, *supra* note 2 at art. 53, nos. 9, 10 SCHLECHTRIEM, UNIFORM SALES LAW 26 (1986); HONNOLD, UNIFORM LAW FOR INTERNATIONAL SALES UNDER THE 1980 UNITED NATIONS CONVENTION 102, 103 (2nd ed. 1991).

norms of the Convention, since "goods/marchandises" is a basic term of the CISG that was originally created by the international legislator.³⁴ A precise characterization of software and international software contracts requires an exact definition and distinction of that basic term since it is unclear whether article 1 also includes intangible movable things. According to the internal law of most of the contracting states to the Convention, computer software is categorized as an intangible, incorporeal thing.³⁵ Due to its specific features, computer software does not automatically fit into the traditional categories of contract law that distinguish not only between tangible and intangible things, but also between contracts for the sale and supply of services.³⁶

There have been few attempts to find a proper definition for the term "goods/merchandises."³⁷ Such attempts have lacked the required autonomous method of interpretation³⁸ that complies dogmatically with the postulate in article 7.³⁹

³⁴ See generally CISG, *supra* note 2.

³⁵ Incorporeal is defined as "without body. Not of material nature" and incorporeal property is "in the civil law, that which consists in legal right merely." BLACK'S LAW DICTIONARY 767 (6th ed. 1990).

³⁶ For a discussion of this issue under German contract law, see JUNKER, COMPUTERRECHT 48 (1988); Mehrings, *Computersoftware und Gewährleistungsrecht*, NJW 1904 (1986); under U.S. contract law, see Horovitz, Note, *Computer Software as a Good under the Uniform Commercial Code: Taking a Byte out of the Intangibility Myth*, 65 B.U. L.REV. 129, 132 (1985); Durney, Note, *The Warranty of Merchantability and Computer Software Contracts: A Square Peg Won't Fit in a Round Hole*, 59 WASH. L.R. 511 (1984); for a discussion under English contract law, see Kirk, *Software of Merchantable Quality?* CL & P 225 (1991); Smith, *Software Contracts*, COMPUTER LAW 35, 36 (1990); Diedrich, *Computersoftware im Geflecht des englischen Vertragsrechts*, CR 459 (1995). For a discussion of this issue under Australian contract law, see Cavanagh, *The Supply of Computer Software, Goods or Services*, A.B.L.R. 12, 195 (1984).

³⁷ Goods, Wares and Merchandise is "a general and comprehensive designation of such chattels and goods as are ordinarily subject to traffic and sale." BLACK'S LAW DICTIONARY 694 (6th ed. 1990).

³⁸ This method of interpretation is required by the CISG, *supra* note 2, at art. 1.

³⁹ CISG, *supra* note 2, at art. 7.

III. THE METHODOLOGY FOR AN AUTONOMOUS INTERPRETATION OF INTERNATIONAL UNIFORM LAW UNDER THE CISG

The international origin of the CISG and the fact that the "international legislator" attempted to find autonomous, original terms without using a single system of laws or legal terminology makes an autonomous method of interpretation necessary. The text of the CISG consists of unique, supranational collective terms formed out of compromises between state delegates based on several systems of laws.⁴⁰ The dogmatic result is the necessity to avoid the use of traditional methods of domestic law in interpreting internal statutes or codes. These methods either violate the specific dogmatic features of international uniform law to which the CISG belongs, or use restrictive bases for interpreting statutes that make them unsuitable.⁴¹

The policy behind the interpretation required by article 7(1) thus becomes clearer when examined against the international character of the Convention that emphasizes the necessity of promoting uniformity in its application of law, and the observance of good faith in international commerce. Although article 7(1) requires an autonomous interpretation independent of domestic law, it fails to prescribe a method for achieving such an international uniform and autonomous interpretation.⁴²

The basic or general *ratio conventionis* of international uniform law, the creation of supranational, uniform statutory rules between contracting states that support stability and predictability in international legal relationships is not fostered by restrictive or "homeward" methods of interpretation. The postulate for putting this basic *ratio conventionis* into effect can be found in the preamble and article 7(1) of the CISG.⁴³

⁴⁰ See Kahn, *La convention de Vienne du 11 avril 1980 sur les contrats de vente internationale de marchandises*, 33 REV. INT. DR. COMP. 951, 956, 957 (1981).

⁴¹ For a discussion of the English "literal rule," see MAXWELL, *THE INTERPRETATION OF STATUTES* 28 (12th ed. 1980); Heydon's Case, 3 Co. Rep. 7a (1584); and Mann, *The Interpretation of Uniform Statutes*, 62 LQR 278 (1946)(criticizing the rule because of the unsuitable results when interpreting international uniform law).

⁴² See Ferrari, *Uniform Interpretation of the 1980 Uniform Sales Law*, 24 GA. J. INT'L. & COMP. L. 183, 200 (1994).

⁴³ CISG, *supra* note 2, at art. 7.

Given the supranational character of the CISG, it is safe to conclude that article 7 calls for an original, autonomous method of interpretation as a matter of law. This conclusion concurs with international scholarly writings in which most authors hold that article 7 requires a departure from those methods of interpretation that focus unilaterally on one system of law. This is especially true of the traditional English common law interpretation that is particularly unsuitable because of its literal rule as a dogmatic basis.⁴⁴ These rules are tailored solely for the interpretation of statutes that have their roots in the common law.⁴⁵

International uniform law has its origin neither substantively nor methodically in the common law system and ordinarily follows in its structure the codes and statutes from civil law countries. Additionally, the common law methods of interpreting statutes subliminally and silently presuppose the supremacy of judge-made law that inevitably, on the basis of the literal rule, results in an interpretation of statutes that is as restrictive as possible.⁴⁶

⁴⁴ See generally Mann, *supra* note 42.

⁴⁵ See Mann, *supra* note 42, at 278; Bayer, *Auslegung und Ergänzung international vereinheitlichter Normen durch staatliche Gerichte*, 20 *RabelsZ* 603, 604-5 (1955). The "hostile" attitude of the English common law toward statutory law becomes clear if one examines the "mischief rule," which supplements the literal rule. It provides that a proper interpretation can be found by comparing the common law as it stood before the enactment with the rules laid down in the statute itself. This comparison is without regard to the real intention of the legislature by means of a historical interpretation; see BENNION, *STATUTE LAW* 89 (2d ed. 1983). U.S. law takes a much more liberal approach toward statutory interpretation in general with a historical interpretation as a normal method even though the English methods of interpretation were adopted in the United States as part of the common law; see SUTHERLAND, 2 *STATUTES AND STATUTORY CONSTRUCTION*, 333 (3d ed. 1943); FARNSWORTH, *AN INTRODUCTION TO THE LEGAL SYSTEM OF THE UNITED STATES* 67 (1983). Nevertheless, there is a trend in the United States against the restrictive historical interpretation because of the inherent danger of procrustating the law; see, e.g., Slawson, *Legislative History and the Need to Bring Statutory Interpretation Under the Rule of Law*, 44 *STAN. L.REV.* 383, 424, 425 (1992).

⁴⁶ See FIKENSCHER, *METHODEN DES RECHTS, BAND II, ANGLO-AMERIKANISCHER RECHTSKREIS*, 112 (1975). This author compares the relationship between statutory and judge-made law in England with a game in which the judges regard statutes as intruders and therefore interpret them as narrowly as possible until the legislature ends the game by enacting a new or more precise statute. However, since the House of Lords decision in *Fothergill v. Monarch Airlines Ltd.* 2 *All E.R.* 696 (1980), a fundamental change has occurred in England in favor of a more lib-

In contrast, the traditional canon for statutory interpretation of the civil law systems of continental Europe that dates from Roman law⁴⁷ is flexible enough to adapt itself to the special features of any statute of any origin and may be supplemented according to the legislator's particular intentions or goals. As a result, the EEC Court of Justice (EuGH) applies this traditional canon of interpretation as a basis for interpreting the EEC treaties. Additionally, the European Community Convention on the Recognition and Enforcement of Judgments in Civil and Commercial Matters (Brussels Convention/EuGVü) has its own specifically developed autonomous method of interpretation.⁴⁸

The term "autonomous interpretation" does not imply a completely new, revolutionary method, but rather a supranational synthesis combining single methods that form a new canon of interpretation. This can be called the "interpretation-ladder." For the purpose of International Uniform Law, "autonomous interpretation" stands for a synthesis of methods based on the traditional civil-law canon since this canon is flexible enough to adapt itself to any statute. For the purposes of international uniform law, the traditional grammatical, systematic and historical method of interpretation must be supplemented by a comparative method.

Although the latter method of interpretation does not refer to a comparison of domestic laws at first, the desired uniformity can only be achieved if judgments and scholarly writings on the particular uniform law from other contracting states are considered. Without any binding power, judgments from other contracting states can only have persuasive authority. Only if no conflicting judgments or scholarly writings can be found, a "true" comparison of domestic laws is admissible as *ultima ra-*

eral interpretation of international uniform law that has also had consequences for the interpretation of pure internal English statutes.

⁴⁷ For a discussion of the Roman origin of this canon in interpreting statutes, see VON SAVIGNY, *SYSTEM DES HEUTIGEN RÖMISCHEN RECHTS* I 296 (1971)(1840); see also, Rabel, *Rechtsvergleichung und internationale Rechtsprechung*, 1 RABELZ 5, 21, 22 (1927).

⁴⁸ As to the autonomous method concerning the EuGVü, see KROPHOLLER, *EUROPÄISCHES ZIVILPROZESSRECHT, KOMMENTAR ZUM EUGVÜ*, 31 (4th ed. 1993); and as to the EEC treaties, see BEUTLER, BIEBER, PIPKORN & STREIL, *DIE EUROPÄISCHE UNION — RECHTORDNUNG UND POLITIK* No. 7.2.4.1. (4th ed. 1993); and PIEPER & SCHOLLMEIER, *EUROPARECHT*, 40 (1991).

tio. In this way, an autonomous, supranational interpretation can be found through a compromise that does not favor the concept of a single legal system (*lex fori*). Any comparison with domestic laws must be examined closely since it stands in contrast to the supranational, autonomous character of international uniform law and puts its uniform interpretation generally at risk.⁴⁹ Additionally, an autonomous interpretation, must at the end, always examine the preamble of the convention in question since the preamble reveals the more precise legislative goals apart from achieving uniform law among the contracting states.

The “interpretation-ladder” described above is suitable to serve as a model to be adopted by all Contracting States for a proper, methodical approach in obtaining a uniform, autonomous interpretation of the CISG pursuant to article 7.⁵⁰ Such uniformity of interpretation could perhaps even make an “international supreme court” superfluous if the Contracting States would provide each other with information or access to all relevant judgments and scholarly writings.

One may ask why the 1969 Vienna Convention on the Law of Treaties and its rules on the interpretation of treaties has not been mentioned.⁵¹ The Vienna Convention is only concerned with the obligations of contracting states to each other under public international law. Such obligations are also created by the CISG and centered in Part IV — Final Provisions, articles 89 to 101 of the CISG. Part IV contains procedures for adherence, rules governing denunciation of the convention and the main obligations that give legal effect to the rules on interna-

⁴⁹ See Ferrari, *supra* note 43, at 209 (suggesting that the concept of foreign law should only be admissible where legislative history or the Convention itself reveals that the drafters had a peculiar concept in the domestic law of a specific legal system). This approach certainly gives respect to the unique and supranational character of the theoretical concepts of the CISG. However, it is very unlikely to find a reference in the travaux préparatoires which describes how the majority of participants in the Conference referred to a legal concept from a single domestic law. Furthermore, such a restricted use of a “true” comparison of domestic laws bars a supranational interpretation that tries to strike at least a balance between different concepts under the domestic laws of the contracting states. Even in difficult cases, there is the fair chance that the outcome of an interpretation does not stem from the *lex fori* or just another single system of laws if the described “interpretation ladder” is applied.

⁵⁰ CISG, *supra* note 2, at art. 7.

⁵¹ Vienna Convention on the Law of Treaties, May 22, 1969, U.N. Doc. A/CONF.39/27, reprinted in 289 I.L.M. 679 (1969) [hereinafter Vienna Convention].

tional sales set forth in articles 1 through 88.⁵² As such, the Vienna Convention applies to Part IV of the CISG.

In contrast, most of the provisions of the CISG articles 1 through 88 address the parties to a contract for the sale of goods and not the obligations of States.⁵³ These obligations arising out of private contracts are governed by specific rules of interpretation as stated in article 7(1).⁵⁴ It is evident then, that the contracting states to the CISG expressly deviated from the interpretation principles enunciated in the 1969 Vienna Convention.⁵⁵ Additionally, the Vienna Convention states that interpretation principles are rigid and therefore only applicable to state obligations.⁵⁶ In contrast, article 6 gives the parties the freedom to derogate from any of the CISG's provisions and article 11 allows parties to contract orally.⁵⁷ This flexibility calls for an equally flexible method for interpreting the obligations of parties, as already stated in article 7, to give full effect to the convention's general rules and purposes.⁵⁸

Nevertheless, a separate problem with interpreting International Uniform law consists of the initial categorization of a term as "unclear." In such a situation, every lawyer unavoidably applies and interprets international uniform law by using his or her "home law." This approach is problematic in that there may be objectively justified doubts of a "reasonable supranational bystander's" proper interpretation of a term in the Convention, whereas the meaning is well-defined under a given "home law." Such an interpretation could lead to a nationalistic approach favoring the *lex fori*, even if an autonomous method of interpretation is being used.⁵⁹ This fear is further supported by the internationally accepted maxim for interpreting private law

⁵² See generally CISG, *supra* note 2.

⁵³ See generally CISG, *supra* note 2.

⁵⁴ CISG, *supra* note 2, at art. 7.

⁵⁵ Vienna Convention, *supra* note 53.

⁵⁶ See HONNOLD, *supra* note 34, at 158-159. See also CISG, *supra* note 2, at art. 7.

⁵⁷ CISG, *supra* note 2, at art. 6.

⁵⁸ See HONNOLD, *supra* note 34, at 158-159; See also CISG, *supra* note 2, at art. 7.

⁵⁹ For reservations concerning uniform interpretation of the law, see Hein Kötz, *Rechtsvereinheitlichung: Nutzen, Methoden, Ziele*, 50 RABELZ 1, 8 (1986). See also Rabel, *supra* note 49, at 5, 20.

statutes, *in claris non fit interpretatio*.⁶⁰ This stems from the supremacy of the legislature and forbids any interpretation of a statute's clear and unambiguous text. Although this maxim originated from Roman Law, it is also valid in common-law countries, despite the fact that there was never such a reception of Roman law in common-law countries as there was in the civil-law countries of continental Europe.⁶¹ Under French law, this maxim is called the *acte claire-doctrine*.⁶² Under English law, it forms part of the "literal rule"⁶³ and the U.S. equivalent is the "plain meaning rule."⁶⁴

The ban on interpreting clear and unambiguous statutes results from the text's legislature order to enforce the statute as it stands. This order has to be enforced by the courts because of the legislature's prerogative in making law. The rules interpreting any statute according to the objective will of the legislature can be found in the principle of separation of powers: Under German law it can be found in article 20 III, 97 I GG,⁶⁵ and under English law it can be found in the "Doctrine of Parliamentary Sovereignty."⁶⁶ In any case, the marking or categorizing of a term as unambiguous is already the result of an "unnoticed" interpretation process. Therefore, such an interpretation is tempting to a lawyer since he or she is then auto-

⁶⁰ Roberta Kevelson, *Symposium: Semiotics, Dialectic, and the Law: Semiotics and Methods of Legal Inquiry: Interpretation and Discovery in Law from the Perspective of Pierce's Speculative Rhetoric*, 61 IND. L.J. 355, 363 (1986).

⁶¹ As to the reception of this maxim under German law, see NJW 1553 (BGH 1956); MÜNCHENER KOMMENTAR-SACKER, BGB, 1 Band, Einl. No. 96, 97 (2nd ed. 1984); For the reception under English law, see MAXWELL, *supra* note 42, at 29. For the reception under U.S. law, see SUTHERLAND, *supra* note 47, at 334-36, 414. The origin of this maxim is found in the Dig. 32.25.1 (Paulus, L. 25D.32): "Cum in verbis nulla ambiguitas est, non debet admitti voluntatis quaestio . . ."

⁶² French courts use this maxim as a means to evade their former duty to submit on clear terms of European Law according to article 177 of the EWGV as applied to the EuGH with its monopoly on interpretation. For a discussion of article 177 see H. VON DER GROEBEN, H. VON BOECKH, J. THIESING & C.D. EHLERMANN, KOMMENTAR ZUM EWG-VERTRAG, 42 (1983).

⁶³ See BENNION, *supra* note 47, at 334-36; see also FARNSWORTH, *supra* note 47, at 67.

⁶⁴ See SUTHERLAND, *supra* note 47, at 334-36; see also FARNSWORTH, *supra* note 54, at 47.

⁶⁵ See 34 BVerfGE 269; MÜNCHENER, *supra* note 63, at Einl. no. 66; See also Canaris, *Die Bedeutung allgemeiner Auslegungs- und Rechtsfortbildungskriterien im Wechselrecht*, JURISTEN ZEITUNG [JZ] 543, 544 (1987).

⁶⁶ See COLIN TURPIN, BRITISH GOVERNMENT AND THE CONSTITUTION 22 (1985).

matically relieved from doing an objectively required autonomous interpretation.⁶⁷

With this taken into consideration, the international lawyer must be careful with his or her interpretation of "officially clear and unambiguous terms" in International Uniform Law because those terms consist of unique rules based on compromise between various systems of law.⁶⁸ A lawyer's incorrect interpretation of international uniform law, to achieve fast results, is particularly possible if it is based on principles with which the lawyer is most familiar with, namely, his or her "home law." Such an interpretation would be in noncompliance with the supranational goals of the Convention.

Additionally, when interpreting multilingual conventions, there is an issue as to which language of the text is authentic,⁶⁹ since the starting point for any statutory interpretation is logically the wording of the statute itself. This wording represents the direct, "frozen" will of the legislature and must be followed by all courts by virtue of its supremacy under the separation of powers. Although multilingual conventions support their own international acceptance, and present valuable advantages for parties from different countries that enter a contract, there is also the side-effect of a vast amount of possible interpretations.⁷⁰ A stringent presumption exists in favor of that text which an "international legislator" declared authentic as a representation of the legislator's actual will concerning the grammatical meaning of the text's wording. All texts that are not authentic are excluded from an autonomous interpretation. The only texts that have become binding on the court by way of

⁶⁷ For a discussion of this problem under German domestic law, see MÜNCHENER, *supra* note 63, at Einl. no. 96, 97. Categorizing a statutory term as clear and unambiguous can only have the meaning that a corresponding practice in interpretation has already established.

⁶⁸ As to the many difficult compromises among the representatives of contracting states that finally led to the ratified text of the CISG, see Alejandro M. Garro, *Reconciliation of Legal Traditions in the U.N. Convention on Contracts for the International Sale of Goods*, 23 INT'L LAW. 443 (1989).

⁶⁹ See Hans Dölle, *Zur Problematik Mehrsprachiger Gesetzes-und Vertragstexte*, 26 RABELZ 4, 24, 27 (1961).

⁷⁰ The ideal case in promulgating future conventions would be an agreement among the contracting states to have one single, authentic text. This would not support the parties by supplying a text in their native language, but instead would provide fewer possibilities for interpretation and thus establish stability and predictability.

a ratification of the Convention are those that were declared authentic by the "international legislator." An "official" translation of a multilingual convention into a non-authentic language contains only a prima facie presumption of its correctness: It still requires an examination and comparison to the authentic text(s).⁷¹

This absolute supremacy of the authentic text of a ratified Convention under German law, can be found in article 3 II 1 EGBGB, since the non-authentic translation is only a part of the national rules of German conflicts law and the original version of any ratified convention prevails over them.⁷²

If there are several, equally authentic texts of a multilingual convention, it is questionable for an autonomous interpretation to let some languages prevail over others simply because of practical reasons as with the CISG, where there are as many as six languages involved.⁷³ As the "international legislator" declares, since all these languages are equally authentic, no language may prevail. A lawyer must find the accurate text ("*texte juste*") by comparing them all.

If such a comparison reveals disparities between the authentic texts that cannot be rectified, then the interpretation rule in article 33 of the 1969 Vienna Convention on the Law of Treaties has to be applied which provides that the real or normative intention of the final diplomatic conference is decisive.⁷⁴ The intention of the international legislator in the final diplomatic conference can be found by way of a historical interpretation of the *travaux préparatoires*.⁷⁵ Such an analysis reveals that concerning the CISG, the official but non-authentic German translation that was jointly drafted by Austria, the Federal

⁷¹ See VON CAEMMERER & SCHLECHTRIEM-HERBER, *supra* note 26 art. 1, no. 3, 7; See also CISG, *supra* note 2, at art. 1 (involving the official German translation of the CISG).

⁷² "EGBGB" is an abbreviation for Einführungsgesetz zum Bürgerlichen Gesetzbuch, or Introductory Law to the Civil Code. 12 J.L. & COM. 261, 263 (1993). For a discussion of the strict interpretation of Art. 3 Sec. II Sentence 1 of the EGBGB, see Jürgen Basedow, *Die Neuregelung des Internationalen Privat- und Prozessrechts*, NJW, 2971, 2975 (1988) and JAN KROPHOLLER, INTERNATIONALES PRIVATRECHT 54 (2d ed., 1994).

⁷³ CISG, *supra* note 2.

⁷⁴ See the Vienna Convention, *supra* note 53, at art. 33.

⁷⁵ "Travaux Préparatoires" is a term of art that refers to the preparatory work of treaty formation. See generally, *supra* note 53.

Republic of Germany, the former German Democratic Republic and Switzerland has to be ruled out as the basis for an autonomous interpretation. As such, it is reasonable to examine the English and French texts of the CISG to find a *texte juste*, because these were the languages in which the deliberations and legal negotiations among the representatives of the Contracting States took place.

It can be presumed then, that the English and French texts of the CISG best represent the intentions of the representatives at the 1980 Diplomatic Conference in Vienna as to the exact wording of the Convention's final text.⁷⁶ The authentic English and French texts of the CISG form the basis for the autonomous interpretation and definition of the term "goods/marchandises" in article 1(1).⁷⁷

IV. AUTONOMOUS INTERPRETATION AND DEFINITION OF THE TERM "GOODS/MARCHANDISES" IN ARTICLE 1 OF THE CISG

A. *Grammatical and Systematic Interpretation*

It is not possible to determine from the isolated English or French texts of article 1 whether the substantive sphere of application includes intangible things.⁷⁸ The translation of "marchandises" only refers to "movable goods" or "freight" without giving any hint whether incorporeal, intangible, computer software can be subsumed under this wording. Furthermore, the term "marchandises" in contrast to the corresponding term *objets corporels mobiliers* in the Hague Sales Convention, is lacking a technical meaning under French domestic law.⁷⁹ Although this could have served as a clue, the term "mar-

⁷⁶ One German author pointed out that the negotiations within the drafting committee of the 1980 Diplomatic Conference were exclusively done in English and that, therefore, in cases of doubt, the English text should prevail. See VON CAEMMERER & SCHLECHTRIEM-HERBER, *supra* note 26 art. 7, no. 22; See also CISG, *supra* note 2, at art 7. and Ulrich Magnus, *Das UN-Kaufrecht tritt in Kraft*, 51 RABELZ 123, 128 (1987) (underlying the practical importance of the English version of the CISG because of the many legal similarities it has with the legal terminology of common-law countries).

⁷⁷ CISG, *supra* note 2, at art. 1.

⁷⁸ CISG, *supra* note 2, at art. 1.

⁷⁹ Convention Relating to a Uniform Law on the International Sale of Goods, July 1, 1964, U.N.T.S. 107 (1972); Convention Relating to a Uniform Law on the Formation of Contracts for the International Sale of Goods, July 1, 1964, 834 U.N.T.S. 169 (1972) [hereinafter "Hague Sales Convention"].

chandises" originates from French trade usage.⁸⁰ This is a striking example of the autonomous terms of the CISG that should not have been connected with the well-known technical meanings of one system of law.⁸¹ In a grammatical interpretation of the term "goods/marchandises," the first step of the "interpretation-ladder" fails. The second step, i.e., the systematic comparison with other norms within the CISG does not reveal whether this term includes intangible things.

It may be inferred that because one intangible thing is excluded from the Convention's sphere of application, i.e., electricity, in article 2(e), then, all intangible things are excluded because electricity simply serves as an example. Such a thesis can be easily disproved by a short analysis of the *travaux préparatoires* of article 2(e). The exclusion of electricity from the Convention's substantive sphere of application was originally initiated by the UNCITRAL Working Group and later adopted by UNCITRAL at its tenth session in 1977 to prevent different categorizations of contracts for transfer of electricity.⁸² It was then predictable that because of the different categorizations of electricity as possible objects of a contract for the sale of goods under the domestic laws of the participating states, without such an explicit exclusion, conflicts between the domestic law and the categorization of this intangible thing under the later Convention would have inevitably occurred.

It is possible to compare the CISG to the equivalent norms of the Convention's predecessor, the Hague Sales Convention of 1964, since the CISG was drafted based on the Hague Convention.⁸³ One could call it a revised version of the 1964 Hague Sales Convention.⁸⁴ Such a comparison also includes all the internationally available judgments and scholarly writings. It must be stressed that under an autonomous interpretation of

⁸⁰ See Kahn, *Convention de Vienne du 11 Avril 1980 Caractères et domaine d'application*, D.P.C.I. 385, 390 (1989).

⁸¹ The change in the wording of the French text of the CISG in contrast to the text of the Hague Sales Convention was also intentional. See Kahn, *supra* note 41, at 951, 956, 957.

⁸² For a historical discussion, see UNCITRAL-yb XIII (1977) at 27; see also HONNOLD, *supra* note 12, at 320. (This same reasoning appears in the Secretariat's Commentary on the 1977 New York Draft) HONNOLD, *supra* note 12, at 404, 406.

⁸³ Hague Sales Convention, *supra* note 81.

⁸⁴ Hague Sales Convention, *supra* note 81.

international uniform law, a systematic comparison with other conventions is, in general, dogmatically inadmissible because of two reasons: First, there is no international uniform law tradition that could serve as justification for the principle of legal unity within one system of law that presupposes a methodical and dogmatic consistency of its laws. Second, the goals of each convention are usually divergent, as with special statutes for particular issues under domestic law. In principle, each convention consists of a small system of law by itself whose specific character as an autonomous body of law is maintained even after its incorporation via ratification into national law. Moreover, the international legislator is generally not identical so that it would be highly questionable to transplant definitions or legal maxims from one convention to another unless these were explicitly or obviously adopted by the international legislator with the same specific meaning for the convention in question.⁸⁵

In the authentic English text of the Hague Sales Convention under article 1, the object of the international sales contract was also called by the term "goods."⁸⁶ In contrast, the French text used the term *objets corporels mobiliers*.⁸⁷ The latter term corresponds to an identical term under French domestic law where it describes clearly and unambiguously tangible movables.⁸⁸ Nevertheless, it has been stressed, from the French point of view, that the state representatives at the 1980 Diplomatic conference in Vienna did not intend to change the meaning of that term by changing the wording in the French text.⁸⁹ This suggests that a grammatical and systematic interpretation of the CISG would be too vague and unproductive for

⁸⁵ For a divergent opinion see KROPHOLLER, *supra* note 50, at 34. This author argues that any international uniform law for the E.C. member states based upon secondary EEC law (regulations and directions) may be systematically compared to one another. This is questionable, since generally, the legislature's goals of each convention still remains different.

⁸⁶ Hague Sales Convention, *supra* note 81, at art. 1.

⁸⁷ The only equally authentic English and French text of the Hague Sales Convention can be found in II BGBL 886 (1973). See also HANS DOLLE, KOMMENTAR ZUM EINHEITLICHEN KAUFRECHT (1976) and R. GRAVESON, E. COHN & D. GRAVESON, THE UNIFORM LAWS ON INTERNATIONAL SALES ACT, 1967: A COMMENTARY (1968).

⁸⁸ See Kahn, *supra* note 41. The non-authentic, official German translation "bewegliche körperliche Sachen" also followed this clear French wording identically; see DOLLE, *supra* note 91, at 8.

⁸⁹ See Kahn, *supra* note 41, at 956.

finding a proper, autonomous definition of the term “goods/marchandises” with special reference to intangible things such as computer software.

B. *Historical Interpretation*

The original intentions of the “international legislator” are also binding on the courts of the Contracting States because these legislative intentions were transformed into applicable law by way of the legislative ratification of the Convention. The analysis of the officially published *travaux préparatoires* for retrieving the actual intention of the “international legislator” concerning the characteristics or composition of the “goods/marchandises” in article 1 does not reveal any further hint for a certain, autonomous, definition according to the “international legislator’s” intention.⁹⁰ The term “goods/marchandises” was not subject to any form of criticism at the UNCITRAL Working Group,⁹¹ which has been engaged in drafting a reform convention based on the Hague Sales Convention.⁹² Nor is such an intention revealed from the negotiations of the entire UNCITRAL from 1977 to 1978,⁹³ or the final diplomatic conference in Vienna in 1980. Furthermore, at the Vienna conference, there were no talks concerning the categorization of intangible movables or computer software as possible objects of the future convention outside the official negotiations.⁹⁴ Other additional, unofficially published materials do not exist. Apart from this, unofficially published *travaux préparatoires* do not play any significant role in the historical interpretation of international uniform law since its main goal is to find under the framework of an autonomous interpretation, the actual intentions of the international legislature based upon at least a majority vote.

⁹⁰ See CISG, *supra* note 2, at art. 1.

⁹¹ UNCITRAL-Yb I 177 (1968-70); see also HONNOLD, *supra* note 12, at 15.

⁹² UNCITRAL-Yb XIII 27 (1977); see also HONNOLD, *supra* note 12, at 320.

⁹³ See Negotiations of the First Committee, Official Records, UNCITRAL-Yb 238 (1968-70) and Protocol of the Plenary Meeting, Official Records I UNCITRAL-Yb 200, 201 (1968-70); see also HONNOLD, *supra* note 12, at 459, 735, 736.

⁹⁴ Otherwise, Schlechtriem’s conjectures concerning the categorization of computer software under the CISG would not make much sense since he personally participated in the 1980 Vienna conference as a member of the German (FRG) delegation. See Peter Schlechtriem, *Uniform Sales Law — The Experience with Uniform Sales Law in the Federal Republic of Germany*, 3 JURIDISK TIDSKRIFT 1, 18 (1991-1992).

This is hardly the case with unpublished travaux préparatoires. Thus, a historical interpretation of the term "goods/marchandises" in article 1(1), within an autonomous interpretation proves to be unproductive regarding intangible things and computer software.

C. *Considering the Judgments and Scholarly Writings in Contracting States*

In achieving an international uniform interpretation of the CISG, an analysis must be made regarding judgments and scholarly writings on the Convention in the contracting states. Foreign judgments have dogmatically been given the power of "persuasive authorities" similar to judgments among common-law countries, especially within the former Commonwealth countries. This means that these judgments constitute an additional reservoir of arguments and possible solutions in the decision making process.⁹⁵ Such foreign judgments cannot have the binding force of "binding precedents," since there is no such internationally binding rule and because German courts are by virtue of article 20 III GG, directly bound only by statutes passed or ratified by the German legislature and not by earlier foreign judgments on any international uniform law.⁹⁶ Nevertheless, no judgments have yet been reported in the contracting states where the convention is already in force, i.e., binding upon the state courts, concerning software or any other intangible movables.⁹⁷

Among scholarly writings, L. Scott Primak from an American point of view has expressed the opinion that the CISG may be applied to software contracts because computer software is a new technical product that, as a movable and identifiable separate object, should not be categorized differently from any other "normal," tangible movable good under article 1. He adds that supporting international trade by statute can only be achieved

⁹⁵ This basic methodical approach is comparable with an earlier suggestion by Magnus. See Ulrich Magnus, *Währungsfragen im Einheitlichen Kaufrecht: Zugleich ein Beitrag zu seiner Lückenfüllung und Auslegung*, 53 RABELSZ 116 (1989).

⁹⁶ Grundgesetz [Constitution][GG] art. 20 (III)(F.R.G.).

⁹⁷ Remarkably, in the U.S. where the CISG has been in force since January 1, 1988, there has been no published judgment in this specific area, even though it is the world's largest market for the import and export of computer software.

by a wide and flexible interpretation of the CISG; in particular, its substantive sphere of application. He also remarks that intangible computer software is not explicitly excluded from the Convention's substantive sphere of application.⁹⁸ Arthur Fakes similarly holds that standard software should generally be regarded as a "good" under article 1 since the outer appearance of a sale of a mass-produced standard computer program does not differ from the sale of tangible movables. He argues that the exclusion of electricity in article 2(f) makes clear that the CISG cannot be applied to purely intangible things and therefore the transfer of software via on-line database transactions is excluded.⁹⁹

John Honnold, in contrast, refers only to the definition of "goods" under article 2-105(1) of the U.C.C. and infers tacitly that this definition corresponds to the term "goods" in article 1 of the CISG. Nevertheless, he argues that domestic law, having been developed for the application of article 2 of the U.C.C. to software contracts, cannot be applicable because of the special features of the CISG. He concludes by offering advice to contracting parties to exclude the application of the CISG to any international software transaction by an explicit contractual provision because of the existing international uncertainties involved with the characterization of software contracts.¹⁰⁰

The German authors in general hold the opinion that the term "goods" under the CISG should be broadly interpreted. Such a definition would contain all things that could be commercially sold. However, this is limited to software that is transferred by fixation on a tangible (floppy disk) data carrier.¹⁰¹ Martin Karollus, from an Austrian point of view, has also followed the German authors but extends the substantive

⁹⁸ See Primak, *supra* note 9, at 214, 217, 231.

⁹⁹ See Fakes, *supra* note 12, at 584.

¹⁰⁰ See HONNOLD, *supra* note 16; see also CISG, *supra* note 2, at art. 2.

¹⁰¹ See CZERWENKA, *supra* note 26, at 138-39. This author makes reference to the principles of a wide, liberal interpretation as expressed in article 1-102 of the U.C.C. In her opinion, 1-102 could serve as a model for the CISG. See also, VON CAEMMERER & SCHLECHTRIEM-HERBER, *supra* note 26 art. 1, no. 21; see also, HOEREN, DER SOFTWAREÜBERLASSUNGSVERTRAG ALS SACHKAUF, CR 908, 916 (1988); PILTZ, UN-KAUFRECHT 48 (1991).

sphere of application of "goods/marchandises" to electronically transmitted software, i.e., without any tangible data carrier.¹⁰²

In summary, the opinions expressed in the scholarly writings in the Contracting States tend to favor the application of the CISG to international software contracts with computer software being subsumed under the term "goods/marchandises" in article 1. These opinions are similar in that they neither attempted to find an autonomous, internationally uniform interpretation, nor used the *travaux préparatoires* as a support or safeguard. This results in a biased interpretation or definition of the CISG term because of the influence of their respective "home law."

D. *"True" Comparison of Laws as a Method of Interpretation Within an Autonomous Interpretation Framework*

The next step on the interpretation ladder is the "true" comparison of laws with equivalent norms under the domestic law of the exemplary contracting states as *ultima ratio* to achieve an autonomous, internationally uniform interpretation of the CISG as provided by article 7(1). When applying this method of interpretation, one should bear in mind that its major goal, within the framework of an autonomous interpretation, is to warrant interpretational results that are not dominated by the domestic legal terminology of one system of laws and in the process, achieve an original, supranational interpretation that corresponds to the basic principles of the national law of the contracting states. If, as a result of this comparison of laws based methodically upon a functional microcomparison of laws,¹⁰³ definitions and categorizations of legal terms or concepts correspond to the compared domestic laws, one can safely conclude that a similar solution or definition within the CISG will satisfy the objective, normative intentions of the "international legislator." This is true, unless a new definition was clearly intended.

Although the CISG is an "open convention" under article 99, because of the great number of Contracting States to the

¹⁰² See KAROLLUS, UN-KAUFRECHT 21 (1991).

¹⁰³ See generally, Zweigert & Kötz, *Einführung in die Rechtsvergleichung*, I Band 4, 5 (3d ed. 1996); RHEINSTEIN, *EINFÜHRUNG IN DIE RECHTSVERGLEICHUNG* 27, 32, 33 (2d ed. 1987).

CISG, it is necessary to choose a limited number of states or systems of law as typical examples.

In categorizing software contracts as contracts for the sale of goods, the most appropriate legal systems among contracting states having already ratified the CISG are the German law of sales under § 433 BGB, and the U.S. law of sales under article 2 of the U.C.C. Both systems of law are chosen as *pars pro toto*; the German domestic law for the civil-law countries, and the U.S. domestic law for the common-law countries. The choice of German law as an example for civil law countries is based on its norms that have continually influenced the making of a convention for the international sale of goods. This is shown by the participation of German delegates during the preparation of the 1964 Hague Sales Convention and, moreover, the single rules of the CISG rooted in German domestic law.¹⁰⁴ Furthermore, there has been an intensive scholarly discussion in Germany since 1985 concerning the subsumation of software contracts under domestic law that has also found its way into judgments of the Federal Supreme Court (BGH).¹⁰⁵ U.S. model law for sales in article 2 of the U.C.C. has influenced several rules of the CISG that were the result of the U.S. delegation's efforts in shaping the CISG according to the norms found in article 2 of the U.C.C.¹⁰⁶ Thus, a comparison to article 2 of the U.C.C. in domestic (interstate) matters concerning software contracts may help in the understanding of the rules of the CISG and the intentions of the "international legislator." It is even more im-

¹⁰⁴ The origin of the rules pertaining to "fixing an additional time" in articles 47, 49(b), 63 and 64(b) is evident if one compares them to § 326 or § 634 BGB ("Nachfrist") that have been internationally regarded as a valuable contribution to the CISG. See KRITZER, GUIDE TO PRACTICAL APPLICATIONS OF THE UNITED NATIONS' CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS 355 (1989); and Honnold, *The New Uniform Law for International Sales*, 18 INT'L LAW. 21, 28 (1984). The original initiative for creating a convention for the international sale of goods came from Ernst Rabel, a German scholar in 1928. A concise history of the CISG can be found in VON CAMMERER & SCHLECHTRIEM-HERBER, *supra* note 26; Einleitung at 25. See also, CISG, *supra* note 2, at art. 47.

¹⁰⁵ The first substantial scholarly writing on this topic under German domestic law was GORNY & KILIAN, COMPUTER SOFTWARE UND SACHMÄNGELHAFTUNG (1985). As to the judgments of the BGH, see the comprehensive and updated register provided by MARLY SOFTWAREÜBERLASSUNGSVERTRÄGE 470 (1991).

¹⁰⁶ For a discussion of the direct influences on the shape of the single norms of the CISG by the U.S. delegation, see, Farnsworth, *The Vienna Convention: History and Scope*, 18 INT'L LAW. 17 (1984).

portant that the question of subsuming software contracts under article 2 of the U.C.C. was addressed as early as 1979¹⁰⁷ and has since been the focal point of intense discussion in the U.S. As such, one can, by way of a comparison of laws, make use of a massive amount of scholarly experience and many judgments in that particular area.

E. *Categorization of Software Contracts Under German and U.S. Domestic Sales Law*

1. *Categorization of Software and Software Contracts Under German Sales Law According to § 433 I BGB*

For the purpose of categorization under German contract law, computer software is generally divided into standard and custom-designed software.

a. *State of Opinions as to the Categorization of Custom-Designed Software Under German Sales Law*

The prevailing opinion of the judiciary and scholarly authors categorizes all contracts for the production and transfer of custom-designed software as contracts of manufacture ("Werkverträge") according to § 631 BGB or contracts for the supply of goods and services ("Werklieferungsverträge") according to § 651 BGB, and not contracts for the sale of goods.¹⁰⁸ Under German law, the term "custom-designed software" comprises all computer programs that are specially designed and programmed for the particular needs of only one user.¹⁰⁹ This strict categorization can be explained by the specific features of different types of contracts under the BGB with each having different rules. The categorization as a contract for the sale of goods according to § 433 BGB presupposes that the object of the contract is already a finished product. In contrast, if the object of the contract must be produced by one party before it is trans-

¹⁰⁷ Note: Computer Programs as Goods Under the U.C.C., 77 MICH. L.R. 1149 (1979).

¹⁰⁸ See judgments of the BGH since its first decision in BGH, WM 615, 616 (1971). One recent case is BGH NJW 3011 (1990), CR 707 (1990). See also, MÜNCHENER KOMMENTAR-SOERGEL *supra* note 63; § 631 BGB, No. 80 and JUNKER, *supra* note 37, at 156.

¹⁰⁹ For a discussion of this definition, see JUNKER, *supra* note 37, at 51, 133; see also HOEREN, SOFTWAREÜBERLASSUNG ALS SACHKAUF 3 (1989).

ferred to the "customer" as a finished product, the contract is ordinarily characterized as a manufacture contract¹¹⁰ or a contract for the supply of goods and services.¹¹¹ As such, the intangibility of software does not pose a problem in distinguishing between a contract for the sale of goods and a contract for the manufacture or supply of goods and services. The labor and services rendered in producing custom-designed software are regarded as the prevailing element of the contract that is therefore categorized accordingly.

b. Judgments of the BGH Involving the Categorization of Standard Software Under German Sales Law

For quite a while, the BGH primarily dealt with the categorization of software contracts that involved a combined transfer of standard software with hardware.¹¹² The term "standard software" is used by German law to describe computer programs manufactured as copies designed for a range of application for an unlimited number of users.¹¹³ The BGH held that such software contracts could be subsumed under the rules of a contract for the sale of goods.¹¹⁴ This characterization required that the basic structure of the contract consists of a sales transaction since the object of the contract, for example, a tangible data carrier (floppy disk) with the computer program stored on it, represents a tangible thing. The court continued, stating that the storage of the originally intangible computer program consisting of pure thought on a tangible data carrier transforms the program itself into a combined tangible movable object that can be the subject of a commercial sale.¹¹⁵

The BGH has left open the question of whether the norms for the sale of goods can be directly applied, or by way of anal-

¹¹⁰ § 631 BGB

¹¹¹ § 651 BGB

¹¹² See, e.g., BGH 29.3, (1983); WM 685 (1983); BGH 20.6 (1984); WM 1089 (1984); and BGH 4.11 (1987) BGHZ 102, 135, DB 105 (1988)(Basic-übersetzungsprogramm) For similarities, see also BGH, NJW 3011 (1990).

¹¹³ For a discussion of this definition, see JUNKER, *supra* note 37, at 51; and HOEREN, *supra* note 113, at 3. Minor services for the ultimate user such as installation of a printer driver for a standard word-processing program does not alter the "standard" status of the software.

¹¹⁴ See § 433 I BGB.

¹¹⁵ See BGH 102, 135, 144; DB 105, 106 (1988). (Basic-übersetzungsprogramm); see BGH, NJW 3011 (1990).

ogy and whether the isolated computer program can be regarded as "Kaufsache"¹¹⁶ if it is entirely transmitted electronically. Only in one case did the BGB focus on the issue of the applicability of the German Hire-Purchase Act ("Abzahlungsgesetz"/AbzG) when it had to categorize a contract that involved the direct electronic transfer of a computer program via a cord from the "seller's" computer to the "buyer's" computer. The Hire-Purchase Act requires that there is a contract for the sale of a movable thing.¹¹⁷ In the case, the BGH referred to one of its earlier decisions, stating that under § 90 BGB, a computer program becomes a tangible movable object if it is stored on a tangible data carrier. As such, the court characterized the entire software contract in question, a contract for the sale of goods as provided by § 1 AbzG. The court's decisive reasoning in holding the contract a sale of goods, was that the computer program had been directly transferred to the buyer's computer by using a technical device or means for the transmission instead of using a tangible data carrier.¹¹⁸

c. Scholarly Writings Involving the Categorization of Standard Software Under German Sales Law

The opinion of German scholars as to the contractual characterization of standard software contracts differs from court holdings especially concerning their respective dogmatic reasoning. However, there is a basic consensus among the scholars that software contracts involving the permanent transfer of standard software are concurrently categorized as contracts for the sale of goods according to § 433 I BGB.¹¹⁹ It is still contro-

¹¹⁶ See the definition of "Goods" under § 433 I BGB.

¹¹⁷ See § 1(1) AbzG.

¹¹⁸ BGH, DB 2596 (1989); JZ 17, 19 (1991).

¹¹⁹ See Brandi-Dohrn, *Die gewährleistungsrechtliche Einordnung des Softwareüberlassungsvertrags*, CR 63, 66 (1986); see also Kilian, *Haftung für Softwaremängel*, in GORNY & KILIAN *supra* note 109, at 19, 21.; HOEREN *supra* note 113, at 31-32; MALZER, *DER SOFTWAREVERTRAG* 84, 85, 91 (1991); Tellis, *Gewährleistungsansprüche bei Sachmängeln von Anwendersoftware*, BB 500, 501 (1990); VON OHLEN, *DIE RECHTLICHE EINORDNUNG DES SOFTWAREÜBERLASSUNGSVERTRAGS* 31, 32 (1990); PALANDT-PUTZO, *BÜRGERLICHES GESETZBUCH* (54th ed. 1995); § 433 BGB No. 5 mwN; REINIEKE & TIEDKE, *KAUFRECHT* 134 (4th ed. 1989). A distinction is not required with regards to commercial sales and the term "goods" used in § 1 HGB because the problem of "tangibility" is the same. The rules of the BGB have to be applied to commercial sales accordingly, except that the term "goods" applies in contrast to §§ 433, 90 BGB only to movables. See MÜNCHENER KOMMENTAR-

versial whether software contracts could be directly categorized as sales contracts with software being the equivalent of "normal," tangible goods and whether this categorization could also be upheld if the computer program is electronically transmitted without the help of any tangible data carrier. Moreover, some authors even favor the application of the statutory remedies provided for in a manufacture contract¹²⁰ instead of those for a sales contract if the software is defective.¹²¹ Among scholars, the accurate opinion prevails according to the judgment of the BGH involving the Hire-Purchase Act, to regard the electronic transfer of software just as a modern technical device forming part of the seller's main contractual obligation. As such, this no longer affects the initial contractual categorization of a software contract.¹²²

As the result of this comparison, one can conclude that contracts for the permanent transfer of standard software for a price are categorized as contracts for the sale of goods, pursuant to § 433 BGB, by both the judiciary and legal scholars. Although there is yet to be a judgment by the BGH that categorizes an electronically transferred computer program as an object for a contract for the sale of goods, one can infer from the BGH's judgment concerning the German Hire-Purchase Act that such a software contract involving the purchase of standard software will be categorized as a contract for the sale of goods even if software is an intangible movable.¹²³

2. *Categorization of Software and Software Contracts Under Article 2 of the U.C.C.*

a. Scholarly Writings

Among U.S. scholarly writings, it has been the prevailing opinion that software contracts can generally be characterized as contracts for the sale of goods under article 2. This charac-

HOLCH *supra* note 69; § 90 BGB, No. 19; SCHLEGELBERGER & HILDEBRANDT-STECKHAN, HGB, 1.Vol., (5th ed. 1973); § 1 HGB No. 32, 33.

¹²⁰ See § 633 BGB.

¹²¹ See TELLIS, *supra* note 123, at 91.

¹²² See MALZER, *supra* note 123, at 91.

¹²³ Additionally, contracts for the supply of energy such as electricity have been permanently characterized by the German Supreme Courts as contracts for the sale of goods according to § 433 I BGB. See, e.g., RGZ 86, 12, 14 (1914) and BGHZ 23, 173.

terization makes no distinction between standard and custom-designed software and additionally makes such characterization even if the same definitions and distinctions of software and software contracts used in German law are being used under U.S. law.¹²⁴ The reason for this, as given by some authors, is that the term "goods" in article 2-105(1) does not presuppose a tangible thing as the object of the sales contract. The essential elements of "goods" are the movability and identification at the time of the sale. Without these elements, property in the "goods" cannot be transferred and would thus render the "goods" virtually unsalable.¹²⁵ Moreover, neither the definitions in article 2-105 nor other sections of the article expressly exclude intangible things from its substantive sphere of application.

Courts have also characterized contracts for the supply of electricity as contracts for the sale of goods though electricity is an incorporeal, intangible thing.¹²⁶ As such, software needs to be characterized as a "good" without looking at questions concerning the protection or transfer of intellectual property embedded in a computer. This is necessary because the transfer of property is dogmatically a completely independent issue and does not affect the initial characterization of software as a possible object of a sales contract.¹²⁷ Besides, it is said that a contract for custom designed software results in the transfer of a ready-to-use computer program as the final product, similar to standard software, so that the former has "specially manufac-

¹²⁴ See, e.g., Horovitz, *supra* note 37, at 129, 138, 151; Meza, *Analysts International Corporation v. Recycled Paper Products, Inc.: Is Custom-Designed Software a 'Good' Under Article 2 of the Uniform Commercial Code?*, 3 SOFTWARE L.J. 548 (1989); Rodau, *Computer Software: Does Article 2 of the Uniform Commercial Code Apply?*, 35 EMORY L.J. 853(1986); *Computer Programs as Goods Under the U.C.C.*, *supra* note 123, at 1149.

¹²⁵ See Holmes, *Application of Article 2 of the Uniform Commercial Code to Computer System Acquisitions*, 9 RUTGERS COMPUTER & TECH. L.J. 1 (1982); Horovitz, *supra* note 37, at 129; Meza, *supra* note 128, at 543; Rodau, *supra* note 128, at 853; *Computer Programs as Goods Under the U.C.C.*, *supra* note 123, at 1149.

¹²⁶ For a discussion of the characterization of electricity supply contracts as sale of goods, see Fickeisen v. Wheeling Elec. Co., 67 W.Va. 335, 67 S.E. 788 (1910); and Helfey v. Warbash County REMC, 151 Ind. App. 176, 179, 278 N.E. 2d 608, 610 (1972); See also 1 A. SQUILLANTE & FONSECA, WILLISTON ON SALES § 5-13. (4th ed. 1973 & Supp. 1991).

¹²⁷ See Rodau, *supra* note 128, at 919.

tured goods" as their object. This is expressly provided for in article 2-105(1) of the U.C.C.¹²⁸

In applying article 2 of the U.C.C. to software contracts it is dogmatically required that any additional services rendered in connection with the contract do not prevail over the transfer of the produced computer program. If this were so, the contract would be categorized as a contract for the supply of services to which only the non-unified common law of the states is applicable. This second categorization uses the "predominant purpose test" which weighs two factors; services and the transfer of goods.

The subjective approach of the "predominant purpose test" is applied to the construction of all contracts and therefore disregards the intangible nature of software. Only one author has so far expressed the opinion that the inapplicability of article 2 follows necessarily from the fact of the intangible nature of software.¹²⁹

b. The Judiciary: Judgments of State and Federal Courts

The many judgments rendered by federal and state courts involving the categorization of software contracts as contracts for the sale of goods under article 2 of the UCC are incoherent and often dogmatically perplexing.¹³⁰ Regarding the characterization of software transferred independently from hardware, the pendulum of judicial opinion swings from "intangible knowledge" in early decisions to the direct characterization of a computer program as a "good" under article 2-105(1) of the UCC.¹³¹

If one separates those judgments that deal with combined software contracts, i.e., consisting of the transfer of software only in connection with hardware, there remain only a few sig-

¹²⁸ See Holmes, *supra* note 129, at 115, 126 (discussion of "final product test"); see also Horovitz, *supra* note 37, at 162.

¹²⁹ See Durney, *The Warranty of Merchantability and Computer Software Contracts: A Square Peg Won't Fit in a Round Hole*, 59 Wash. L.Rev. 511 (1984).

¹³⁰ The reason for this lies not in the differing versions of article 2 being in force in the United States, but in the independence of the judiciary and the lack of a doctrine of stare decisis between federal and state courts.

¹³¹ See, e.g., *First Nat'l Bank of Ft. Worth v. Bullock*, 584 S.W.2d 548 (Tex. Civ. App. 1979); and *Honeywell Information Systems, Inc. v. Maricopa Cty.*, Ariz. App. 575 P.2d 801. These decisions involved tax law that served as guidelines for decisions on the characterization of software as goods under article 2 of the U.C.C.

nificant decisions involving the basic problem of characterizing the intangible computer program as a "good" under the UCC. The majority of other decisions characterize software contracts as contracts for the sale of goods under article 2 without any dogmatic differentiation. In these cases, software, the object of the contract, is indirectly characterized as a "good."¹³² During the years 1989 to 1991, a "new generation" of federal court cases addressed the applicability of article 2 of the UCC to software contracts. These cases described below, are notable in their detailed and dogmatically specific opinions.

In *RRX Industries v. Lab-Con, Inc.*,¹³³ the U.S. Court of Appeals for the Ninth Circuit characterized a standard computer program transferred by a tangible data carrier a "good" according to article 2-105(1) of the UCC.¹³⁴ The court deemed the software contract a contract for the sale of goods by applying the predominant-factor test.¹³⁵ Although the Court of Appeals did not specifically focus on the problem of the intangibility of the computer program, the decision is nevertheless important because it was the first time a federal court had directly characterized an isolated computer program unconnected with the sale of hardware as a "good" under article 2-105 of the UCC.

In 1987, the U.S. District Court in *Analysts International Corporation v. Recycled Paper Products, Inc.*,¹³⁶ followed the result in *RRX Industries* and categorized a software contract that included the manufacturing and installing of a custom-designed computer program as a contract for the sale of goods under article 2 of the UCC.¹³⁷ The main issue the court addressed here was not whether an intangible computer program was a "good"; it was to decide whether under the predominant factor test the sale prevailed over the services.¹³⁸ Thus, the court did not address the intangibility issue in detail. In applying the predominant-factor test to the whole contract, the court ruled that the

¹³² See, e.g., *Atlas Indus. Inc. v. Nat'l Cash Register Co.*, 216 Kan. 213, 531 P.2d 41 (1975); *Applications, Inc. V. Hewlett-Packard Co.*, 501 F.Supp. 129 (S.D.N.Y. 1980), *aff'd* 672 F.2d 1076 (2d Cir. 1982).

¹³³ 772 F.2d 543 (9th Cir. 1985).

¹³⁴ *Id.* at 546.

¹³⁵ *Id.*

¹³⁶ 1987 U.S. Dist. LEXIS 5611, *11.

¹³⁷ *Id.*

¹³⁸ 1987 U.S. Dist. LEXIS 5611, *10.

extensive services rendered in producing this custom-designed, computer-program were necessary for achieving the ready-to-use program as the final result.¹³⁹ As such, the U.S. District Court concluded that it was impossible to distinguish this custom-designed software from any other "specially manufactured goods" as mentioned in article 2-105(1) of the UCC.¹⁴⁰

The decision of the U.S. Court of Appeals for the Third Circuit in *Advent Systems Ltd. v. Unisys Corporation*¹⁴¹ is especially notable because of its excellent analysis of the judgments and scholarly writings¹⁴² available at the time. The software contract at issue involved the transfer of hardware, the manufacturing of a custom-designed computer program, and the rendering of elaborate instructions on an hourly basis to the "buyer."¹⁴³

In its analysis, the Court of Appeals relied on the legislative principles and goals contained in article 1-102 that promote commercial transactions and practices through liberal contract interpretation.¹⁴⁴ The court held that the term "goods" in article 2-105(1) must also be liberally interpreted to apply the unified rules of article 2 to a variety of commercial transactions.¹⁴⁵ As such, the court determined that the term "goods" encompasses all personal property that is transferrable and identifiable except those things that are expressly excluded by article 2-105 itself.¹⁴⁶

When intangible intellectual ideas existing in a computer program are transferred to a computer-readable medium or data carrier they automatically become "goods" in the same way a musical composition becomes fixed when recorded on a compact disc. Therefore, it was unimportant to the court whether the software could be separately protected as representing intellectual property, since a computer program stored in a computer-readable form on a data carrier had already become a

¹³⁹ 1987 U.S. Dist. LEXIS 5611, *11.

¹⁴⁰ *Id.* See also Meza *supra* note 128, at 543.

¹⁴¹ 925 F.2d 670 (3rd Cir. 1991).

¹⁴² See Schlinsog, *Advent Systems Ltd. v. Unisys Corporation: U.C.C. Governs Software Transactions*, 4 SOFTWARE L.J. 611 (1991).

¹⁴³ *Advent Systems*, 925 F.2d at 674.

¹⁴⁴ *Id.* at 675.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

transferrable, identifiable, commercially salable and movable object, sufficient for its characterization as a "good."¹⁴⁷

The court ended its analysis by applying the predominant-factor test because of the substantial services offered by the "seller" and reached the conclusion that the "sale" was the prevailing factor of the software contract.¹⁴⁸ Taking the subjective approach, the court based this decision solely on the parties' intentions.¹⁴⁹

Although a detailed decision, this judgment lacks a proper distinction between the transferable, identifiable computer program as a separate, independent, object of a sales contract and the data carrier as a pure means for storage or transmission. Legal issues could arise in the event software is electronically transmitted. Based on the liberal interpretation of "goods" by the court in *Advent Systems*, one can conclude that the different means for transferring a computer program are completely irrelevant. Even an electronic transmission presupposes that the computer program has been transformed from its intellectual existence into a computer-readable form and therefore the essential metamorphosis from pure idea to "good" already took place somewhere in the past.

V. SUMMARY: THE AUTONOMOUS INTERPRETATION AND
DEFINITION OF THE TERM "GOODS/MARCHANDISES" IN
ARTICLE 1 OF THE CISG AS APPLIED TO
SOFTWARE CONTRACTS

In applying the results of an autonomous interpretation, especially of a "true" comparison of law, one must avoid "rejections" by the CISG when transplanting those results, since there is no concurrent legal or dogmatic tradition between the domestic laws of the contracting states and the rules of the Convention.¹⁵⁰ By applying the sales law analogously, and based on a comparison of laws by the autonomous interpretation of the

¹⁴⁷ *Id.* Real property, money, and investment securities are explicitly excluded by article 2-105(1) of the U.C.C. The liberal interpretation of the term "goods" applied here by the Court of Appeals stems from the case of *Lobianco v. Property Prot., Inc.*, 292 Pa. Super. 346, 437 A.2d 417 (1981).

¹⁴⁸ 925 F.2d at 676.

¹⁴⁹ *Id.*

¹⁵⁰ For a discussion of the problems in applying comparative law methods, see Kahn-Freund, *On Uses and Misuses of Comparative Law*, 37 M.L.R. 1 (1974).

term "goods/marchandises," software contracts under both German and U.S. domestic sales law are generally characterized as contracts for the sale of goods.¹⁵¹

Despite the many differences in both systems of law, there is surprisingly the same dogmatic problem of applying domestic sales law to software contracts since software contracts involve incorporate, intangible things and traditionally, only tangible movables or things were regarded as proper objects for a contract for the sale of goods. Nevertheless, in both systems of law, exceptions have concurrently been made to contracts for the supply of electricity that have been, in analogy, characterized as contracts for the sale of goods by equating electricity to tangible movables.¹⁵²

The distinction under German law between standard software and custom-designed software is unsuitable for an autonomous interpretation under the CISG and would only provoke a "rejection": This distinction is entirely based on the contractual categories of a manufacture and sales contract under the specific features of the BGB, whereas article 3 of the CISG involves a different concept. The CISG treats "goods to be manufactured" the same as "finished goods." Thus, the exclusion of custom-designed software from the sale of goods contracts under German domestic law¹⁵³ is inapplicable in a comparison of laws for an autonomous interpretation of article 1 of the CISG.

By using the definition found in article 2-105 of the UCC, a definition essentially based on the needs of commercial trade, it is possible to autonomously define the term "goods/mar-

¹⁵¹ Interestingly enough, the prevailing opinion among scholars in England also favor an analogous application of the Sale of Goods Act to computer software contracts; see Kirk, *supra* note 37, at 229. See also Smith, *supra* note 37, at 35-38, 52. Under English sales law, the distinction between standard software and custom-designed software is also irrelevant because the definition of "goods" in section 61(1) of the Sale of Goods Act includes "future goods." The Australian decision in Toby Construction Products Ltd. v. Computa Bar (Sales) Pty. Ltd. 2 N.S.W.L.R. 38 (1983) as persuasive authority was the starting point for the English opinion described above. See also, Cavanagh, *supra* note 37, at 195.

¹⁵² See RGZ 86, 12, 14; BGHZ 23, 173; and Fickeisen v. Wheeling Elec. Co., 67 W.Va. 335, 67 S.E. 788 (1910); Helvey v. Wabash Cnty. REMC, 151 Ind. App. 176, 179, 278 N.E.2d 608, 610 (1972). A more recent case is Belotti v. Duquesne Corp., 4 U.C.C. Rep. Serv. 2d 1393 (1987).

¹⁵³ BGB art. 433.

chandises" found in article 1 of the CISG. The CISG term comprises "all movables, including things to be manufactured ("future goods") that can be identified as forming the object of the sale and in which personal property can be transferred."¹⁵⁴ Such a broad, autonomous definition of the term "goods/marchandises" complies with the legislative goal expressly stated in the preamble of the Convention; namely, removing legal barriers to international trade and thus providing the international commercial community with legal stability and predictability.

Software, then, can be subsumed under this autonomous definition of "goods/marchandises," since a computer program can be transmitted or transferred by technical means that make it a "movable." It can be identified as the object of a sale when it "arrives" at the buyer's computer. The means of transmission is irrelevant for the initial characterization because the transfer of the software already forms part of the performance by the seller. A computer program, in the end, is just a new technical product that does not fit into the traditional categories of the domestic law of the contracting states, but is, in practice, bought and sold as any tangible movable.

Intellectual property embedded in a computer program is transferred by licensing agreements that work independently of the sales contract. As such, the seller may, at the conclusion of the sales contract, agree with the buyer not to transfer the property in the computer program, and merely grant a license for using the software. This is despite the fact that the seller is generally obligated under article 30 of the CISG to transfer the property in the goods. However, this obligation can be modified by the contract.¹⁵⁵

Therefore, the substantive sphere of application of the CISG extends to all international sales contracts despite whether the subject matter of the contract is standard software or custom-designed software, or whether the software is transmitted electronically or by means of a tangible data carrier. Nevertheless, the same restrictions as to the applicability of the CISG to contracts for the transfer of tangible goods also extend to software contracts. Thus, the CISG cannot be applied to mixed-transactions, software contracts in which, according to

¹⁵⁴ U.C.C. § 2-105(1).

¹⁵⁵ See CISG *supra* note 2, at art. 6.

article 3, the supply of labor or other services form the major part of the obligation. Neither can the CISG be applied to contracts for the supply of manufactured goods, e.g., custom-designed software, if the buyer supplies a substantial part of the necessary materials for the manufacturing.¹⁵⁶

VI. THE FUTURE REALIZATION OF AN AUTONOMOUS, INTERNATIONALLY UNIFORM INTERPRETATION OF THE CISG

Legal scholars and practitioners in contracting states believe that the best way to bring about an autonomous, internationally uniform interpretation of the CISG while preserving legal unity between contracting states is to establish an "international supreme court" modeled after the EuGH. Such a court would have jurisdiction as a final appeals court for the interpretation of international uniform law, including the CISG.¹⁵⁷ Since there will be no agreement on the political level for establishing such an international supreme court in the near future, the responsibility for realizing a true legal union rests with the judges and lawyers in the Contracting States. They are called upon to safeguard autonomous and internationally uniform results in interpreting the Convention.¹⁵⁸ Those results can be achieved by applying the above-mentioned "interpretation ladder" as an autonomous method for interpreting International Uniform Law and avoiding any particular nationalistic approach.

Maintaining uniformity via an autonomous interpretation does, however, require information involving the international status of opinions in the judiciary and scholarly writings. For this purpose, UNCITRAL has established a central "information pool" in Vienna for collecting judgments and scholarly writings on all UNCITRAL's model laws and conventions. These "inputs" of information, supplied by official, national reporters named by each member state of UNCITRAL, are then dissemi-

¹⁵⁶ Another type of contract excluded from the Convention's sphere of application is a "consumer contract," involving the sale of goods for personal, family or household use. See CISG *supra* note 2, at art. 2(a).

¹⁵⁷ See, e.g., C.M. BIANCA & M.J. BONNELL, COMMENTARY ON THE INTERNATIONAL SALES LAW: THE 1980 VIENNA SALES CONVENTION, 88 (1987). See also, CISG *supra* note 2, at art. 7.

¹⁵⁸ CISG *supra* note 2, at art. 7.

nated and revised by the Secretariat in yearbooks.¹⁵⁹ In the future, UNCITRAL plans to establish direct access to a computer-based data bank.¹⁶⁰ The multiple advantages can already be seen in the timesaving private data banks such as Juris, LEXIS and WESTLAW. One may hope those courts in the contracting states will realize an autonomous, internationally uniform interpretation of the CISG according to article 7(1) with the assistance of the "interpretation ladder." As such, a cautious, responsible interpretation of international uniform law is required to prevent new legal dissipation because of short-sighted, nationalistic approaches.

¹⁵⁹ Yearbooks of UNCITRAL include case law on UNCITRAL Texts (CLOUT).

¹⁶⁰ For a discussion of UNCITRAL and its future information disseminating methods, see Diedrich, *Chancen und Ziele von Einheitsrecht für den internationalen Handelsverkehr*, IPRax 408, 411 (1992). The "information pool" was initiated by UNCITRAL in 1988. See UNCITRAL-Yb XIX 15, 16 (1988).