NOTE

THE GROUP OF 77 DRAFT PROVISIONS CONCERNING SUPPLIER GUARANTEES FOR THE PROPOSED INTERNATIONAL CODE OF CONDUCT ON TRANSFER OF TECHNOLOGY*

INTRODUCTION

At any given time, a variety of multilateral United Nations-sponsored negotiations are in progress. Of those underway presently, perhaps none is more important than the United Nations Conference on Trade and Development (UNCTAD) Intergovernmental Working Group negotiations leading toward an International Code of Conduct on Transfer of Technology. These negotiations on technology transfer are a crucial element in the global dialogue on the New International Economic Order. This Note will focus on the Group of 77 draft provisions regarding guarantees to be made by suppliers of technology in international transfer of technology agreements, and will argue that these draft provisions are, by and large, reasonable, and should therefore be acceptable to the United States and other developed nations.

An initial question which arises concerning United States and Group B participation in the UNCTAD negotiations leading toward such an international code, is "why bother?" Despite an occasional voice in opposition, the consensus seems to be that the

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1 The Group B nations are negotiating as a bloc at the sessions of the Intergovernmental Group of Experts on an International Code of Conduct on Transfer of Technology, sponsored by the United Nations Conference on Trade and Development (UNCTAD). The Group B nations (also known as "The West," the "developed countries," and the "First World") are virtually all members of the Organization for Economic Cooperation and Development (OECD). They are grouped together in this Note because of their collective Draft Text submitted at the UNCTAD-sponsored negotiations.


This particular Note, in fact, does not argue that the Third World is benefitting from the
Group B nations, and especially the United States, are greatly benefitted by the present system of technology transfer. The United States and other developed nations prosper in the preservation of the status quo. However, there are several important reasons why we should bother.

First, without the United States and the Group B nations, the Group of 77 and the Group D nations might develop a code of present transfer of technology system; rather, it argues that the United States is losing its once-enormous technological advantage (in development of technology and in transfer to others) because we are failing to encourage the development of new technology. We are losing our edge, the Note argues, to Japan and Western Europe.


64. The code could, inter alia, cover the following practices and agreements:

(a) All acts, decisions or agreements associated with the establishment and operation of wholly-owned subsidiaries or affiliates and of joint ventures (with various degrees of participation), involving either implicitly or explicitly the transfer of technology. The code would thus cover transactions entered into by independent constituent legal or economic units, and technological operations within one economic unit;

(b) Agreements or acts for the sale of technology, for example purchases of machinery, industrial plants, equipment, intermediate goods and raw materials, in so far as they are part of an operation involving a technological transaction; transfers or assignments of proprietary rights such as patents, industrial designs, etc.;

(c) Agreements or acts for the licensing, lease or use of technology, for example licensing agreements covering the right to use or exploit patents, utility models, industrial designs, or any other industrial property right as defined by the relevant law and/or international convention; agreements or acts for the use of or authorization to exploit trade marks, service marks, trade names, indication of source or appellations of origin, in so far as they are part of a transaction involving technology transfer;

(d) Agreements or acts involving the flow of technological information, for example transactions covering the provision of technical knowledge, know-how and technical expertise in the form of plans, diagrams, models, instructions, guides, formulations, specifications, personnel training, and other modalities including the transfer of technical information applicable to productive detailed engineering designs for the installation and operation of plant and equipment and for the production of goods and services.

(e) Industrial collaboration agreements of any kind, including sub-contracting as well as the provision of management, technical and marketing services.

This definition of "transfer of technology" shall also serve in this Note as a non-exclusive definition of "technology."

4 Support for this statement is provided in Section IA of this Note, infra.

5 Now numbering well over 100 nations, the Group of 77 is a coalition made up primarily of developing nations.

6 Group D is comprised of communist nations: the Union of Soviet Socialist Republics, the Eastern European nations, and Mongolia.
conduct which would be completely unacceptable to the United States, the other Group B nations, and the entire Western business community. Since the legal nature of the code (i.e., binding or voluntary) is as yet undetermined, we have little to lose now but much to gain in later years by providing input for the code, for it will surely be of great legal and economic significance in the future, whatever its legal nature at the outset.

Second, a code, whatever its provisions and whatever its legal nature, may preclude further piecemeal national legislation which has tended, where it has appeared, towards severity in the restrictions imposed on the freedom of parties to negotiate their agreement on a technology transfer. Furthermore, a rather moderate code of conduct may tend to force a rollback of the restrictive national legislation already passed, so that those nations with such legislation will remain competitive in the market for foreign technology.

Third, concern for our image in the international community should lead us to negotiate. Those Group of 77 nations with which we are friendly, and in which we invest, expect as a minimum that we negotiate in good faith.

Fourth, it is important, in and of itself, that we continue a dialogue on such an important subject at the global level. This globalization of discussion will prevent unilateral national action and special deals, and may well help to strengthen the United Nations system.

Finally, and crucially (although this is the weakest dollars-and-cents argument), the Group B nations ought to bargain seriously. Whether one conceives of technology as private property, as just another commodity on the world market (albeit an important one) to be bought and sold subject to all the vagaries of the marketplace, or, on the contrary, as part of the “common heritage

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9 The Possibility and Feasibility of an International Code of Conduct on Transfer of
of mankind," which should be transferred as equitably and cheaply as possible, with full consideration of the great needs and limited financial resources of the Group of 77 nations, a strong case can be made that an international code of conduct regulating the transfer of technology is a necessary international remedy for the present system and its maladies.

Assuming henceforth that negotiations toward an international code of conduct for the transfer of technology are fully worth the time and effort of Group B and the United States, this Note will concentrate on one important aspect of such a code, supplier guarantees. The Note is organized in the following manner: Section I will provide background for the reader. It will explain how the present system for the international transfer of technology benefits Group B nations and their Transnational Enterprises (TNEs) and hurts the technology importing nations of the Group of 77. The importance of technology will be stressed. In addition, the objectives of the proposed code will be examined briefly, along with the role of guarantees within the framework of the entire code. Section II will present in detail the Group of 77 proposals concerning guarantees which are to be required of technology suppliers. These proposals will be contrasted briefly with Group B proposals concerning those guarantees made by the technology supplier to the technology recipient. Next, Section III will discuss United States law concerning guarantees (warranties) in technology transfer agreements. Section IV will provide a brief look at current international practice in transfer of technology agreements, with regard to guarantees. Section V of the Note will present policy arguments in support of the proposition that most of the Group of 77 proposals on guarantees are reasonable. In light of the circumstances obtaining presently, the consequences of Group B rejection of the Group of 77 proposals, and the prob-

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Thus it will be seen in Section II, examining the various draft proposals, that the Group B Draft for the Code of Conduct reflects far more satisfaction with the status quo than does the Group of 77 Draft Code. This is clearly shown by a comparison of the two Drafts' provisions concerning guarantees.
able results of their inclusion in an international code of conduct on the transfer of technology, the Group of 77 proposals will be shown as economically acceptable and politically advantageous. Briefly, Group B counter-arguments will be examined. The Conclusion will embody the preceding arguments in the form of a few proposals for United States and Group B action at the Intergovernmental Working Group Meetings sponsored by UNCTAD, now in progress in Geneva, Switzerland.

I. BACKGROUND

A. The Importance of Technology

To put the UNCTAD discussions on a code of conduct in their proper perspective, it is vital to understand the importance of technology itself. "Today, technological progress is generally considered to be the most important factor in economic growth. Recent studies estimate its contribution to productivity growth at 75%, if not even at 90%." Technological advances, "synonymous with development," form the most important of the "three columns" on which the economic and social development of the Group of 77 must depend. Some Group of 77 spokesmen have even "rested the fate of the [North-South] dialogue ... on the outcome of these negotiations ..." Most of the valuable, useful and transferable technology in the world lies in the hands of the industrialized or developed countries. This is true of the technology whatever its legal form:

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14 Id. at 429, citing a draft resolution by 26 developing countries for the 9th Session of the Trade and Development Board. The other two columns are trade and finance.


It should not be overlooked that in theory there are two ways for those who need technology to get it: first, to receive it from someone else who already has it, by sale, license, gift or other transfer; second, to develop it "from scratch" through one’s own research and development efforts. See Kunz-Hallstein, note 12 supra, at 429. The concern of this paper is generally the first method, and more specifically the transfer by sale, license or other arrangement from First World TNE to an entity (a subsidiary, related corporation,
patents, know-how, trade secrets, and the like are all predominantly in the hands of the Group B nations. Furthermore, "almost all of this technology is owned by private companies, not by the governments of these countries." These large privately-owned companies do business internationally on a huge scale. There is a clear link between the TNEs and technology, production, wealth and power. Finally, "fully 90% of the world's MNCs are incorporated and headquartered in the United States." Group B nations, the United States among them, may envy the Arabs their oil; Zaire, Zambia and Chile their copper; Jamaica and Trinidad their bauxite, and Brazil and Columbia their coffee. Yet the present system of technology transfer is nothing if not a "technology cartel" in which the United States plays the leading role. We have in a sense cornered the technology market, and it is a seller's market. One of the keys to development, technology, is locked within the vaults of the Group B TNEs, and leased or sold at whatever price the market will bear.

If technology were to be transferred at reasonable prices and under reasonable terms and conditions, discussions leading toward a code of conduct would be unnecessary. Yet TNEs, with their stranglehold on worthwhile technology and their enormous

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17 Id. The developed countries include both Group B countries and Group D countries. Group D is the socialist group. "The Group B countries, however, possess the major share of the world's valuable technology . . . ." Id.

18 Id.

19 One writer has gone so far as to claim that "[b]y the 1980's and continuing throughout the remainder of this century, it is estimated that 75% of the world's trade and production will be controlled by 300 or fewer MNC's [Multinational Corporations]." Comment, The Trading with the Enemy Act of 1917 and Foreign-Based Subsidiaries of American Multinational Corporations: A Time to Abstain from Restraining, 11 SAN DIEGO L. REV. 206, 209 (1973). ("MNC" as a term for these large corporations is herein abandoned in favor of TNE (Transnational Enterprises), which is currently in vogue at the United Nations.)

20 . . . . [t]he decisions taken by multinational corporations regarding investment, prices, costs, allocation of overheads and transfer pricing, research and development expenses, etc. are seen as directly falling under the domain of public policy. The controversy over nation-states' prerogatives and the multinational firm's freedom of movement is a question of "what functions the nation state is likely to continue to perform in an era of international capital" . . . .

Egea, Multinational Corporations in the Operation and Ideology of International Transfer of Technology, 10 STUD. COMP. INT'L DEV. 11, 13 (1975).

21 Note, Control of Multinational Corporations' Foreign Activities, 15 WASHBURN L. J. 435, 436 (1976), citing Comment, supra note 19.

22 The problems which arise from permitting the free play of ordinary market forces in the sphere of transfer of technology agreements are outlined in Section V of this Note.
wealth and power, can dictate the terms of many technology transfer agreements. The "formidable array of restrictive clauses that can be (and usually are) included in transfer of technology agreements," serve the interests of the TNEs and their owners. Public relations efforts to the contrary notwithstanding, the development of technology importing Group of 77 nations is a low TNE priority. Real priorities are less altruistic. "The rate of return [for United States direct investment in Third World nations] is double that of investment in the developed countries" (emphasis added). A strong element in the achievement of this high rate of return is the retention of this dominant position in technology. In 1966, for example, United States TNEs spent 94% of their research and development dollars in the United States. Of the remaining 6% of research and development dollars, two-thirds (4%) was spent in Canada, West Germany and the United Kingdom. Recent estimates of total research and development expenditures in Third World nations as a percentage of the global total are still as low as 1% or 2%.

The international patent system reflects this "quasi-monopoly" position of TNEs in technology. To begin with, "[p]atents have been justified as instruments to encourage inventive activity, technological innovation and disclosure of information." In theory, patents perform this function by giving the inventor a monopoly in the use of his/her invention for a certain limited period (17 years in the United States), after which the invention

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23 Egea, supra note 20, at 16. The author cites as examples the following:
(1) export restriction clauses to all countries or certain regions; (2) obligation to purchase raw materials, intermediate products and/or capital goods and equipment from licensor; (3) control by licensor of volume of production and sales, location of production, transactions with other firms; (4) clauses requiring licensee to transmit any improvement related to licensed process to licensor (sometimes free of charge); (5) obligation to invest certain specified amounts on commercial advertising of product manufactured with licensed process; (6) clauses allowing the licensor to intervene in licensee's management decisions regarding production, prices, new investments, etc.; (7) clauses which oblige licensee not to reveal or use technical secrets after contract has expired; (8) conflicts over interpretation and breach of contractual obligations are transferred to foreign courts.

Id.
26 Id. See also THE EUROPEAN COMMUNITY AND THE THIRD WORLD 14 (Office for Official Publications of the European Communities, November 1977).
27 Egea, supra note 20, at 18.
falls into the public domain, available for use by anyone. Several practices of TNEs in the sphere of international transfer of technology agreements, however, frustrate the basic purposes of the system in the technology receiving countries. First, grant-back provisions in such agreements often force improvements in the technology made in the receiving country to be given back to the TNE in the developed nation. Second, license agreements often cover both patents and unpatented know-how. "[W]hen the patent expires and falls in the public domain, it cannot be used in industry since the relevant know-how was not disclosed when the application was filled out." Third, as was noted above, TNEs do their research and development in their home countries, not their host countries. Finally, TNEs practice "defensive" registration of patents to insure their quasi-monopoly in technology in their host countries. Statistics on patent registration in some Group of 77 nations, and even some fairly well 'developed' nations, reflect this technological advantage. The ratio of nationals to foreigners holding patents in Chile declined from 1:2 in 1937 to 1:19 in 1967. In Peru, the ratio declined from an already low 1:19 ratio in 1960 to a shocking 1:38 in 1970. Even in Greece, a WesternEuropean nation, the ratio of nationals to foreigners who were granted patents in 1967 was less than 1:3; in Portugal in the same year the ratio was 1:12.

The effects of this Group B technological lead over Group of 77 nations are adverse and enormous. The United States Tariff Commission found that "the Multinational Corporations, in their transactions with the United States, exert a uniformly large, negative impact on the current accounts of balance of payments of the host

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29 Id.
30 Id. at 20.

Patents have become part of corporate business strategies. The accompanying licenses of unpatented know-how and sales of technical assistance are the mechanisms that permit a multinational corporation to tie the license with the sale of capital goods and intermediate products. These are the arrangements that at the operational level allow the multinational firm to "preserve its monopoly rents" through an institutional monopoly that prolongs the life of the original technological monopoly.

Id.
31 Extrapolation from the figures provided in Table 3: "Nationality of Patent Holders," in Egea, supra note 20, at 21, taken from Oxman, "Notes sobre la comercializacion de tecnologia en los paises del Grupo Andino" (November 1971) (OAS/PRDCT, Mimeo).
countries.\textsuperscript{32} The way that technology is transferred also ensures that Group of 77 nations continue to export primary products and import finished manufactured goods.\textsuperscript{33} Finally, payments by Group of 77 nations for technology are already large (in one United Nations study, amounting to 7\% of the combined exports of six developing nations\textsuperscript{34}) and are increasing rapidly.\textsuperscript{35}

\textbf{B. The Objectives of the Code\textsuperscript{36}}

A distinguished American writer has suggested that the code be drafted with a view towards three objectives:

1. preserving an environment in which technology transfer is potentially profitable for the transferor;
2. improving the bargaining strength of a developing country enterprise by defining reasonable external restraints to be placed on the transferor; and
3. retaining sufficient flexibility for both the transferor and transferee to permit negotiation in any given situation on an acceptable consensus which is tailored to the needs of that situation.\textsuperscript{37} (Emphasis added.)

This statement of objectives is somewhat unusual. A new international code is not needed to "preserve" and "retain" what already exists. In fact, the only real purpose of the negotiations is to change the system, to develop a code which will "improve ac-

\textsuperscript{32} Mirabito, \textit{supra} note 25, at 219-20, note 35, citing T.C. \textit{PUBLICATION} 537 at 29 (January 1973).

\textsuperscript{33} In 1967, the exports from Latin America were made up from the following groups: Primary Products 87\% percent, Semi-Manufactures 8 percent, Manufactures 5 percent. On the other hand, in developing the Organization for Economic Cooperation and Development (OECD), 73\% percent of the exports were in manufactured goods. Thus, Latin America remains dependent on unstable-priced [sic] agricultural products for the bulk of its export earnings, while export earnings from manufactured goods are pitifully small.

\textsuperscript{ Mirabito, \textit{supra} note 25, at 218 (footnotes omitted).}


\textsuperscript{ No attempt is made here to trace the history of these negotiations on a code of conduct for the transfer of technology. The proposals are those submitted by the Group of 77 and Groups B and D at the Fourth Session of the Intergovernmental Group of Experts, contained in U.N. Doc. TD/AC.1/11, Annexes I, II and III (1977). See text at notes 115-130, \textit{infra}, for the results of the latest session.

\textsuperscript{37} Finnegan, \textit{supra} note 16, at 77.
cess to technology at fair and reasonable prices and costs" and on fair and reasonable terms. These terms should take into account the "needs and conditions prevalent in developing countries." Elements of this main objective of changing the system include the unpackaging of technology transfers, prevention of abuse of the dominant position of the technology suppliers (through restrictive clauses in transfer of technology agreements), the development of technological capability in technology receiving countries, assurance of the effective performance of technology transfer agreements, special treatment for developing countries, national regulation of transfer of technology agreements by the receiving country, equitable dispute settlement mechanisms and guarantees by the parties to transfer of technology agreements. Of course, these objectives should not be achieved in such a way that the normal technology transaction from Group B TNE to Group of 77 receiving enterprise (either private company or government agency) becomes unprofitable. Nevertheless, the point of the negotiations is change. Keeping in mind that the changes must, in the final analysis, improve the bargaining position of technology recipients in the Group of 77 nations, this Note will now take a closer look at the subject of guarantees.

C. The Role of Guarantees within the Code

The code will contain a number of "procedural" sections (such as Principles and Objectives, Definitions and Scope of Application, Legal Nature, National Regulation, and Applicable Law and Settlement of Disputes) and some important "substantive" sections. The most important of the latter are regulation of restrictive practices in transfer of technology arrangements, special treatment for developing countries, and guarantees by source and recipient enterprises. Of these "substantive" sections, the first two can clearly benefit only technology recipients; thus these sections require Group B concessions. The section on guarantees, however, cuts both ways: there are, on the one hand, those guarantees which will be required of the technology supplier, and, on the other hand, those guarantees which will be required for the technology recipient.

In a sense, the guarantees required of technology recipients are

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38 An International Code of Conduct, supra note 3, at 29, ¶ 162.
39 Id. at 5, ¶ 28(a).
the positive counterpart to the concessions which must be made by Group B concerning restrictive practices, special treatment for developing countries and the guarantees required of the source enterprises. The acquiring enterprise will be bound to abide fully by the terms of the transfer agreement and by the other provisions of the code relating to payments, security of investment, compensation in the event of expropriation, and the like. This *quid pro quo* will benefit both sides by stabilizing the conditions under which technology is transferred.

II. GROUP OF 77 GUARANTEE PROPOSALS

A. Text and Discussion

Chapter V of the "Revised Text of Draft Outline of an International Code of Conduct on Transfer of Technology-submitted on behalf of the experts from the Group of 77" is called, simply, "Guarantees." It is divided into three sections: first, guarantees that shall be made by technology supplying enterprises; second, guarantees that shall be made by technology receiving enterprises; and third, guarantees that the governments of technology receiving countries may require in transfer of technology agreements. Because the bone of contention is primarily the first section, discussion of the other two sections is relegated to the footnotes.\(^{40}\)

\(^{40}\) Chapter V. section 5.2:

The enterprises receiving technology shall in accordance with the spirit and the standards of the Code, guarantee that:

(i) The technology acquired will be used as specified in the arrangement;

(ii) All legitimate payments as specified in the arrangement shall be made to the technology supplier;

(iii) Technological secrets as defined in the arrangement shall be honoured during the duration of the arrangement;

(iv) The quality standards of the product specified in the contract will be reached and maintained where the contract includes the use of suppliers' trademarks, trade name or similar identification of goodwill.

Only two items above are likely to provoke serious discussion: the use of the word "legitimate" in (ii), and the "during the duration of the arrangement" clause in (iii).

As for "legitimate" payments, most Group B nations' contract law would presume payments set forth in a valid contract to be legitimate; if the payments are not legitimate, the payor should not have signed the arrangement and agreed to the payments. Alternatively, the payor has a heavy burden of proof in showing the agreed-upon payments have become illegitimate. "Legitimate" from this perspective is surplusage. Perhaps it is inserted as a Group of 77 "bargaining chip."

A more serious problem is presented by (iii). In the case of a patent license for ten years, it seems fairly clear that under the international patent system, upon the expiration of a license under the patent, the patent still belongs to the licensor, assuming the 17 year
This first section is deceptively brief; it is quoted in full:

5.1 The enterprise supplying technology shall guarantee that:
   (i) The technology acquired is suitable for the manufac-

period to be unexpired. More generally, one American has said that "[i]n the absence of an
agreement, however, it is the transferee which lacks a right to use technology protected by
valid property rights. Clauses which restrict use of unexpired property rights after agree-
ment expiration are therefore proper." Finnegan, supra note 16, at 101. In his footnote 73,
States Supreme Court upheld such an agreement covering a trade secret. Finnegan sug-
jects that this is not an area where a blanket ban on post-expiry restrictions are ap-
propriate; rather, he says that this should be handled through "proper planning and
negotiation of the terms," id, and he suggests that "[a] clause providing for renegotiation of
the agreement after a certain period of time may help to provide some assurances of the
transferee's continued ability to use the technology if the commercial life should prove
longer than originally expected." Id. at 102. In the best of all possible worlds, leaving such a
thorny problem to the parties would be fine; but under the present transfer of technology
system, with the very unequal bargaining power of the parties
(see
Section V of this Note),
international restraints on such restrictive clauses may be necessary. One can easily en-
visage a situation in which a process containing both patents and trade secrets is licensed;
upon expiration of patent and license, however, royalties remain the same due to the impor-
tance of the "unexpired" property rights in the trade secrets.

It is clear that this particular "guarantee" by the receiver to the supplier of technology in
fact gives the receiving entity more than it gets under the status quo. It is just as clear that
this is likely to be a contended point. It seems probable, however, that the point will be set-
tled in the discussion of "restrictive business practices" rather than guarantees. See
Chapter IV of the Group of 77 Draft, "The Regulation of Practices and Arrangements In-
volving the Transfer of Technology," section 4.2(1), Restrictions after expiration of arrange-
ment, in Report of the Intergovernmental Group of Experts, supra note 10, at Annex II.

Chapter V, section 5.3, lists eight guarantees which may be required by the governments
of the technology-receiving countries. A few examples will suffice as a basis for comments:

(i) The technology is the most adequate to meet the particular technological re-
quirements of the recipient given the supplier's technological capabilities; . . .
Query: what is the "most adequate" technology? Who decides what is the "most adequate"
and then, who decides whether or not the original decision was correct? What happens if
the technology selected was not the "most adequate"? Finally, if the supplier must make
the initial determination, can the supplier ever be obliged to give the business to a com-
petitor?

(iii) The undertaking to explore on a continuous basis the possibility of
substituting local inputs for imported materials, equipment and spare parts used
in the production process; . . .
If this guarantee is meant to be more than hortatory (i.e., the supplier should make a good-
faith effort to explore the possibilities), it could make for great uncertainty in transfer of
technology agreements. Again, the who and how of administration pose great practical pro-
blems.

(iv) More favorable terms granted by the supplier to a recipient should be extend-
ed to subsequent recipients in similar positions within the same country; . . .
One writer states flatly, "[a] most favored licensee clause should not be required by a code
of conduct." Finnegan, note 16 supra, at 108. First, it is difficult to value technology; two
processes which seem quite similar may not really be so. Second, differences in contract
clauses may translate into differences in the value of the technology. Finally, in cases where
the supplier finds itself doing business at a loss but honoring its contract, if it is forced to
tute of products covered by the arrangement;
(ii) The content of the technology transferred is full and complete for the purposes of the arrangement;
(iii) The technology obtained will be capable of achieving a predetermined level of production under the conditions specified in the agreement;
(iv) National personnel shall be adequately trained for service in the recipient country in the knowledge of the technology to be acquired including operation and management techniques of the enterprises;
(v) The recipient shall have access to all improvements upon the techniques in question during the lifetime of the arrangement;
(vi) Where the recipient of the technology has no other alternative than acquiring capital goods, intermediate inputs and/or raw materials from the technology supplier or any other enterprise designated by him, the prices of the articles shall not be higher than current international price levels;
(vii) Where the recipient of the technology has no other alternative than selling his output to the technology supplier or any other enterprise designated by him, the prices of the articles shall not be lower than current international price levels;
(viii) Spare parts, components and other requirements necessary for using the imported technology shall, if required by the recipient, be provided for a specified period of time and without additional charges for maintaining this guarantee;
(ix) The technology suppliers, while drawing up the design specification of plants, will take fully into account the possibility of utilizing locally available resources.

The first guarantee, (i), that the technology is "suitable for the manufacture of products covered by the arrangement," closely resembles § 2-315 of the Uniform Commercial Code in its intent:

**Implied Warranty: Fitness for Particular Purpose.** Where the seller at the time of contracting has reason to know any para-

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1 Throughout the rest of this Note the guarantees shall be referred to by their Group of 77 Draft numbers, e.g. (i) (suitable for use).
ticular purpose for which the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods, there is unless excluded or modified under the next section an implied warranty that the goods shall be fit for such purpose.\textsuperscript{12}

Guarantee (i) presupposes both of the conditions necessary for the warranty of fitness for a particular purpose: first, that the seller of the technology has reason to know of the particular purpose that the buyer has in mind; and second, that the buyer of technology is actually relying on the seller's skill and judgment.\textsuperscript{13}

Of course, § 2-315 does not apply to many technology transfer agreements, even those accomplished entirely within the United States, for Article 2 of the Uniform Commercial Code applies to "transactions in goods." While a requirement that the technology is suitable seems reasonable in light of the unbalanced bargaining positions of the buyer and seller, Group B reaction to this and other provisions will depend to a large extent on (a) who determines when the technology is unsuitable and (b) the consequences of such a determination.

Guarantee (ii) requires the technology seller, lessor or licensor to guarantee "full and complete" technology in light of the purpose of the arrangement. Again, the guarantee presupposes that the seller is in a better position than the buyer to know what the buyer really needs, and that the buyer is actually relying on the seller's knowledge. This guarantee is somewhat akin to § 1-203 of the Uniform Commercial Code: "Every contract or duty within this Act imposes an obligation of good faith in its performance or enforcement."\textsuperscript{14} That is, in view of the seller's advantage, it would be unfair to sell three-quarters of the necessary technological goods and withhold that last crucial quarter, whether to sell later or to retain a quasi-monopoly over the technology.

Guarantee (iii) bears some resemblance to (i). The technology must be "capable of achieving a predetermined level of production under the conditions specified under the agreement." It must do what it is supposed to do, and produce as much as is expected. As with the first two guarantees, Group B acceptance or rejection of this proposal, based as it is on the realities of the technology

\textsuperscript{12} U.C.C. § 2-315.

\textsuperscript{13} That both these conditions in fact exist in most transfer of technology situations shall be developed in Section V of this Note.

\textsuperscript{14} U.C.C. § 1-203.
market, is likely to depend initially on who determines when the technology is capable of achieving the agreed upon production levels and whether the "conditions specified in the agreement" have been met. Group B action will further depend on the consequences of demonstrated failure of the technology. Group B negotiators are also likely to be very interested in the relative obligations of the parties in the event of the seller's failure to comply with the guarantee.

Guarantee (iv) is a bow in the direction of the now unchallenged principle that nations shall have control over all resources and sources of production located within their own boundaries. The supplier of technology guarantees that "[n]ational personnel shall be adequately trained in . . . operation and management techniques." The Group of 77 nations are insisting that regardless of present ownership, the technology receiving enterprise shall as much as possible have the complexion of a local enterprise, foreshadowing the day when the enterprise shall be locally owned. A number of nations already have legislation requiring much the same thing as guarantee (iv). Again, Group B's response to this will depend on whether the clause requires or recommends, and on who determines what constitutes "adequate training."

Guarantee (v) is important and likely to be controversial, depending on its final wording. As presently drafted by the Group of 77 nations, technology recipients may benefit little: technology suppliers might effectively close off access to further improvements by raising the price to exorbitant levels. A better formulation in terms of protecting the interests of technology recipients in the Group of 77 nations might be: "The technology supplier shall notify the recipient of all improvements upon the technology transferred, and the recipient shall have access to these improvements on fair and equitable terms during the lifetime of the agreement."

Several nations have already passed legislation
which parallels the current Group of 77 Draft guarantee (v) by requiring that the recipient have "access" to improvements.\textsuperscript{48}

It is possible that the Group of 77 Draft might even have gone a step further concerning guarantee (v). The Group of 77 might well have argued that since the TNEs who ordinarily supply technology spend virtually nothing on research and development in technology receiving countries, it is only fair that the technology supplier be required to surrender all further improvements on the technology to the recipients without charge. This gratis transfer would be premised on the theory that the Group of 77 technology recipients are paying for research and development costs in the Group B nations. However, "[t]he imposition of such a clause could require the licensor to contract away an unknown improvement which might well be worth more than the original technology. Such a result would be unreasonable and could jeopardize transfer agreements."\textsuperscript{49} Perhaps because this provision was so unequivocally unacceptable to Group B, it was dropped from the Group of 77 Draft after its first and last appearance, in the groundbreaking Pugwash Code.\textsuperscript{50}

Guarantees (vi) and (vii) are two sides of the same coin: the technology supplier shall not abuse a monopolistic or quasi-monopolistic market position in its sale to the recipient of capital goods, intermediate inputs and/or raw materials (guarantee (vi)), or in its purchase of the technology recipient's output (guarantee (vii)). If the supplier continues to stand in a dominant position, it is obliged by the Group of 77 Draft to deal with the recipient at price levels no less favorable to the recipient than the "current international price levels." The wording of the Draft precludes agreement in advance to a set price which is less favorable to the recipient than the "current international price level." Both parties are subject to the vagaries of the marketplace. Problems arise however, as shall be seen in Section V of this Note, due to this market's imperfections. By way of example, there may exist a cartel in raw materials, or a situation in which one or more TNE technology suppliers in fact have a disproportionate say concerning "current international price levels" of important commodities.

The wisdom of guarantee (viii) is fairly dubious insofar as spares and replacements must be supplied "without additional

\textsuperscript{48} Note by the Secretariat, \textit{supra} note 46, at Annex 4, note 5.

\textsuperscript{49} Finnegans, \textit{supra} note 16, at 107.

\textsuperscript{50} \textit{Id.} at 106-07, note 86.
charges." The technology supplier, faced with a guarantee written into his contract to this effect, is likely to insist on the inclusion of these uncertain costs in the contract price. To cover himself, he may very well estimate high. An alternative approach is presented in a Note on Guarantees by the UNCTAD Secretariat. The "possible formulation" suggested therein seems more reasonable. This formulation requires the supplier to keep on hand, if required by the recipient, "[a]n adequate stock of accessories, spare parts, components and other requirements necessary for using the imported technology." The stock shall be "maintained by the supplying party for such period as may be necessary having regard to the terms of the agreement" and parts and the like "shall be supplied to the recipient, as required, at the usual prices." The discussion in the text of the Note by the UNCTAD Secretariat makes it clear that "usual costs [prices] means those, or other related costs, contained in the original agreement." This form of the guarantee would require the parties to a technology transaction to discuss projections for spare parts and repairs which might be necessary, and to discuss prices concretely. While it apparently gives the technology recipient less, the Secretariat's proposal actually will afford the technology recipient more protection, since the supplier will not be able to "guess high" as to the cost of spares, replacements and so on. A noted United States writer concurs with the approach set forth in the Note by the Secretariat. He concludes his brief discussion of this guarantee with the following comment:

The licensee may be better off to negotiate an individually-priced guarantee of spare parts, components and servicing, and thus preclude an unearned windfall for the licensor should the licensor's necessarily speculative prediction of parts and servicing cost be higher than the actual cost. A code of conduct requirement for such a no-additional-cost guarantee may therefore have the effect of introducing inflexibility into the negotiations rather than improving the transferee's bargaining posture.

The last guarantee, (ix), is somewhat similar to (iv). The technology supplier may no longer import everything (people,

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51 Note by the Secretariat, supra note 46, at Annex 4, note 5.
52 Id. at Annex 5 bis.
53 Id.
54 Id.
55 Finnegan, supra note 16, at 107-08.
machines, building materials, etc., right down to bottled water) from the home to the host country. Just as guarantee (iv) requires the supplier to train local personnel, (ix) requires the supplier to "take fully into account the possibility of utilizing locally available resources." As with a number of other guarantees, Group B reaction to this guarantee is likely to depend very much on who may decide whether the technology supplier has complied with the guarantee, and on the consequences of non-compliance.

B. Group B Proposals Contrasted

Having examined the nine proposed Group of 77 Draft guarantees for requirements of technology suppliers, a look at Group B proposals is in order. "A minor exception notwithstanding, the Group B Code fails entirely to address the matter of guarantees."\textsuperscript{56} The exception is found in Chapter IV of the Group B Code, "Responsibilities of Source and Recipient Enterprises," § 4.1:

Source enterprises should:

\ldots

(vi) Guarantee that (a) the technology meets the description contained in the technology transfer agreement; (b) the technology, properly used, is suitable for the use specifically set forth in the technology transfer agreement.\textsuperscript{57} (Emphasis supplied.)

A few remarks concerning these two guarantees are appropriate. First, under the Uniform Commercial Code, when goods do not meet the description in the agreement, the buyer may sue the seller and the seller may be liable for damages for breach of contractual warranty.\textsuperscript{58} Thus, guarantee § 4.1(vi)(a) affords the technology recipient one of the protections which already exists in United States sales of technological goods. Second, guarantee (b) provides the recipient with less protection than under the Group of 77 Draft guarantee proposals. It corresponds somewhat to Group of 77 guarantee (i); but Group of 77 guarantees (ii) and (iii) additionally require that the technology be "full and complete for the purposes of the arrangement" and "capable of achieving a

\textsuperscript{56} \textit{Id.} at 103.


\textsuperscript{58} U.C.C. §§ 2-313, 2-601, 2-714 and 2-715.
predetermined level of production." Third, the language used in the Group B Draft is that the supplier should make these guarantees. Even these rather rudimentary guarantees are intended to be parts of a voluntary code, not a binding one. This portion of the Group B Draft is written as if the parties were at arms' length; these provisions would preserve the status quo in which the technology suppliers of the Group B nations have a far superior bargaining position than that of the technology recipients.

Because concessions must be made primarily by Group B nations, and because these concessions will inure to the benefit of Group of 77 technology recipients for the most part, discussion of the Group D guarantee proposals is to be found in the footnotes.9

9 The Group D Draft was submitted by the Soviet Union, the Eastern European nations (except for Rumania) and Mongolia. Report of the Intergovernmental Group of Experts, supra note 10, at Annex IV, Revised Outline of the Draft Code of Conduct for the Transfer of Technology as Suggested by Experts from Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Mongolia, Poland and Union of Soviet Socialist Republics. Chapter V of the Group D Draft is entitled "Guarantees." § 5.1 is a list of 8 things which the "supplying party shall guarantee" (emphasis supplied). Id. at § 5.1. This Draft provides that "[t]he provisions of this Code of Conduct shall be universally applicable to all agreements relating to the international transfer of patented or non-patented technology . . . ." Id. at § 2.2.3. The language in the Draft is difficult.

In brief, the provisions are:
1. that the supplier hire local personnel and use local resources. This is similar to Group of 77 guarantees (iv) and (ix).
2. that the technology can be used "upon the terms and conditions stipulated in the agreement." This guarantee is similar to Group of 77 guarantee (i).
3. that the technology supplier guarantee that "the use of the technology acquired will lead to the achievement of the predetermined result in accordance with the provisions stipulated in the agreement." This guarantee is similar to Group of 77 guarantee (iii) except that the language used is stronger here.
4. that the supplier owns the technology free of any third party rights.
5. that the "documentation for the technology transferred is complete, correct, of good quality and takes into account the local conditions of the technology receiving country." It seems that the guarantee of "good quality" should apply to the technology rather than the documentation. If this surmise is correct, then this guarantee resembles somewhat the Group of 77 guarantee (ii) (full and complete technology). If this surmise is incorrect, and it is really the documentation which is to be of good quality, then perhaps this guarantee relates to the training of local personnel and the adaptation of the imported technology to the conditions of the receiving country.
6. that local personnel shall be trained and the supplier shall render other technical assistance to achieve the aims of the agreement.
7. that "upon request of the acquiring party, and upon the terms and conditions agreed upon" the technology acquirer shall have access to further improvements and technological assistance related to the technology transferred. This guarantee differs from the access to later improvements guarantee in the Group of 77 Draft (v), which requires no request by the technology acquiring party.
8. when the technology acquirer must sell his output to the seller, the price shall be no
It should be remembered however that the final code will apply to all transnational transfers of technology, not just North-South transfers.

C. Need for Consensus

The effort to arrive at an international code of conduct for the transfer of technology is likely to fail entirely unless a real consensus is reached between Group B, whose TNEs are the main technology owners, and the Group of 77, the primary technology acquirers. There must be agreement on the content of the code of conduct and on its legal nature. There are at least three different aspects of the legal nature issue which will have to be resolved: (1) Will the code of conduct be binding or simply persuasive in nature? (2) Will the code be addressed to governments or to the parties to a technology transaction, whoever they may be? (3) Will the code become international law or will it have to be made effective through national legislation? One writer has claimed that "[t]he substance of the [Group of] 77 Outline, which incorporates radical departures from the traditional concepts followed in international licensing practice, is likely to be issued by UNCTAD as the finalized Code of Conduct due to the numerical superiority of the developing countries within the Conference." This view, it seems, is clearly wrong: it is very unlikely at this point that the Group of 77 nations (who now number over 100) would ram through the Conference a tough and "binding" code which would then run the risk of being virtually ignored by the Group B nations, who, after all, still have most of the technology. That sort of political maneuver would set the entire effort back to the beginning.

The reality of the situation, which is no doubt comprehended by lower than "the current levels of world prices." This is the substance of guarantee (vii) of the Group 77 Draft; curiously, the converse, guarantee (vi), is left out. Id. at §§ 5.1.1-5.1.8.

Group D objectives are clear and reflect the interests of the Group D nations: on the one hand, Group D nations possess some valuable technology, which they do not want to give away; on the other hand, the Group D nations wish to gain access to superior Group B technology on the best possible terms, and to gain political capital in the world community by supporting, as much as is possible given their own interests, the Group of 77 in its main objectives. There is substantial overlap in the interests of the two groups.


most of the experts in Geneva, is that the Group of 77 and Group B must reach a consensus for there to be improvement over the status quo. Group B nations must stay on amicable terms with the Group of 77 nations in order to sustain their own economic prosperity and growth. Group B nations increasingly need the Third World for the supply of raw materials and as a market for their own goods. Moreover, Group B dependence on OPEC nations for fossil fuels, combined with OPEC strength in the Group of 77, means that the Group B nations must negotiate seriously. On the other hand, the present transfer of technology system must be changed by the Group of 77, with the consent of Group B, in order to improve the bargaining position of Group of 77 technology acquirers in negotiations with Group B owners of technology (TNEs). The Group B Draft itself realizes this point in its section, "Objectives and Principles," which includes among its objectives "[t]o encourage and facilitate the access to and the international flow of proprietary and non-proprietary technology under fair and reasonable and mutually-agreed terms and conditions." Drafting a code of conduct for the international transfer of technology which is totally unacceptable to Group B nations would create another area of international law which, like international human rights law, would be widely ignored, with impunity.

III. UNITED STATES LAW CONCERNING GUARANTEES IN AGREEMENTS FOR THE TRANSFER OF TECHNOLOGY

Agreements in which technology changes hands are characterized by a number of variations. This section will look at

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8 Group B Draft, supra note 57, at Chapter II, § 2.2.
9 Id. Another forward-looking provision is:
   To facilitate and encourage the growth of the scientific and technological capabilities of all countries including the ability to develop indigenous technology so that all countries may participate in world production and exchange of technology.

Id. The Group of 77 Draft handles the concept "transfer of technology" in this way:
2.3 The Code shall apply, inter alia, to the following international transactions, agreements or arrangements for the transfer of technology:
   (i) Assignment, sale and licensing transactions covering all forms of industrial property including patents, inventors certificates, utility models, industrial designs, trademarks, service names and trade names.
   (ii) Arrangements covering the provision of know-how and technical expertise in the form of feasibility studies, plans, diagrams, models, instructions, guides, formulae, the supply of services, specifications and/or involving technical, ad-
guarantees in United States law covering two different and rather common forms of transfer of technology agreements: first, the sale of goods which are technological in nature, and second, the licensing of technology, both patented and unpatented.

A. The Sale of Goods

A transfer of technology transaction in the form of a contract for the sale of technological goods in the United States is governed by Article 2 of the Uniform Commercial Code. An excellent summary of guarantees in such a contract appears in the Note by the UNCTAD Secretariat:

It would appear that in United States law what are called "guarantees" in the drafts would be known as "warranties." In the U.S. Uniform Commercial Code it is provided that an express warranty by the seller in a contract for the sale of goods has the following effect: "Any affirmation of fact or promise made by the seller to the buyer which relates to the goods and becomes part of the basis of the bargain creates an express warranty that the goods shall conform to the affirmation or promise" (Section 2-313, paragraph 1(a)). It is further stated (in paragraph 2) that "it is not necessary to the creation of an express warranty that the seller use formal words such as "warranty" or "guarantee"...."

Thus U.S. law recognizes the use of the word "guarantee" but its formal effect is to constitute a warranty in law which is imported into the contract. As the warranty is defined as going to the "basis of the bargain" the effect of a breach of warranty by the seller is that the buyer may treat the contract as at an end and repudiate the transaction.\footnote{U.C.C. § 2-102.} \footnote{Note by the Secretariat, supra note 46, at 3 (footnote omitted).}
Thus, a party acquiring technology in a transaction covered by the Uniform Commercial Code (UCC) would be protected by a clause in the agreement describing and explaining the use of the technological goods. Moreover, a standard clause which excludes "all warranties, express or implied" would likely have little effect due to § 2-316(1). That Code section seeks to protect the buyer from such clauses. "[N]egation or limitation [of an express warranty] is inoperative to the extent that such construction is unreasonable." Comment 1 to § 2-316(1) explains that this section "seeks to protect a buyer from unexpected and unbargained language of disclaimer by denying effect to such language when inconsistent with the language of express warranty..."8

There are two types of implied warranties under the Uniform Commercial Code. The first is the implied warranty of merchantability.9 If the technology seller is a "merchant with respect to goods of that kind," the goods must be at least such as "pass without objection in the trade under the contract description,"7 and "are fit for the ordinary purposes for which such goods are used." The implied warranty of merchantability may, however, be excluded from the agreement by a conspicuous writing,72 by oral exclusion of the "warranty of merchantability,"73 by expressions such as, "as is" and "with all faults,"74 by course of dealing,75 and by the buyer's examination (or refusal to examine) when examination should have revealed the defect at issue.76

The second implied warranty (perhaps the most important of all warranties in view of the often unequal position of the parties in many transfer of technology transactions) is the implied warranty

67 Words or conduct relevant to the creation of an express warranty and words or conduct tending to negate or limit warranty shall be construed wherever reasonable as consistent with each other; but subject to the provisions of this Article on parol or extrinsic evidence (Section 2-202) negation or limitation is inoperative to the extent that such construction is unreasonable.

U.C.C. § 2-316(1).
68 Id.
69 U.C.C. § 2-314.
70 U.C.C. § 2-314(2)(a).
71 U.C.C. § 2-314(2)(c).
72 U.C.C. § 2-316(2).
73 Id.
74 U.C.C. § 2-316(3)(a).
75 U.C.C. § 2-316(3)(c).
76 U.C.C. § 2-316(3)(b).
of fitness for a particular purpose. The applicable UCC section reads:

Where the seller at the time of contracting has reason to know any particular purpose for which the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods, there is unless excluded or modified under the next section an implied warranty that the goods shall be fit for such purpose.

The Official Comment distinguishes between "particular purpose" and "ordinary purpose" in the implied warranty of merchantability, § 2-314, but points out that a contract can contain both warranties.

The implied warranty of fitness for a particular purpose may be excluded by a writing which is conspicuous, or by language such as "as is" or "with all faults" which "call the buyer's attention to the exclusion of warranties and makes plain that there is no implied warranty." In theory, this warranty can also be excluded by examination (or refusal to examine) by the buyer, and by course of dealing. But in view of the reliance element necessary for the implied warranty of fitness for a particular purpose, these modes of warranty exclusion seem inapposite.

Thus technology buyers in transactions falling within the UCC provisions receive some protection, corresponding roughly to Group of 77 guarantees (i) and (iii). The buyer shall get what he bargained for—sometimes more, never less. Section V of this Note will discuss in some detail why the UCC guarantees (adequate for the United States where the technology buyer and seller are more often at arm's length), even though not in force in transnational transactions, are inadequate protection for the Group of 77 technology acquirer.

B. The Licensing of Technology

Licensing is one of the most common methods of transferring technology from one party to another. A license agreement, whether it covers patents, know-how, industrial property, trade

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77 U.C.C. § 2-315.
78 Id.
79 U.C.C. § 2-316(2).
80 U.C.C. § 2-316(3(a).
81 U.C.C. § 2-316.
secrets or technical assistance, is "written authority granted by the owner [of the technology] to another person empowering the latter to make or use [the technology] for a limited period or in a limited territory."82 Furthermore, "[l]icenses have no statutory basis, and rights under them arise from contract . . . ."83 Implied warranties have not, as a rule, been written into licenses.84 In cases where the technology licensed was found to be unsatisfactory, courts have granted relief on a failure of consideration theory.85

There are at least five obstacles to the raising of an implied warranty in a technology licensing agreement:

(1). the necessity of a sale;
(2). the possibility for the licensee to examine the technology;
(3). the necessity of proving justifiable reliance by the licensee on the licensor;
(4). the inapplicability of the UCC "merchantability" warranty to licenses (e.g., problems in proving that the seller is a "dealer" and that the technology is such that it would not "pass without objection"); and
(5). the problem of determining when a breach has occurred in a license agreement.86

84 Id. The writer is indebted to Mr. Vukowich, author of the Comment, for much of this discussion.

The recent case of Lear, Inc. v. Adkins, 395 U.S. 653 (1969), now constitutes the major exception to the general principle stated in the text. The pre-Lear rule had been that "the licensee under a patent license agreement may not challenge the validity of the licensed patent in a suit for royalties due under the contract." Automatic Radio Manufacturing Co., Inc. v. Hazeltine Research, Inc., 339 U.S. 827 (1950). In Lear, however, the Court specifically overruled Automatic Radio Manufacturing:

Now it is clear that any licensee may refuse to pay contractual [sic] royalties under a licensed patent, at least from the time he notifies his licensor that he considers the patent to be invalid. Such refusal is not a violation of the contract and the licensor is forced to rely on his patent rather than on the terms of the license contract. The Supreme Court in Lear did not base its decision on a balancing of the equities of the licensor and licensee, but rather on "the strong federal policy favoring the full and free use of all ideas in the public domain." Consequently, any attempt by a licensor to deter his licensee from exercising such right of repudiation may very well be considered an illegal misuse of his patent.

86 Comment, supra note 83, at 186.
87 Id. Three of these are cited by the Secretariat in Note by the Secretariat, supra note 46, at 8.
While there are strong policy reasons for importing the implied warranties concepts into license transactions, tradition and case law are opposed. The arguments for implied warranties in international transfer of technology agreements will be explained and examined in Section V of this Note.

IV. CURRENT PRACTICE CONCERNING GUARANTEES IN INTERNATIONAL LICENSING AGREEMENTS

The essence of international practice concerning guarantees in transfer of technology agreements may be gleaned from a few textual discussions in United States licensing manuals. It is difficult to collect statistics on actual guarantee provisions in such agreements because such provisions are more exculpatory than restrictive. Figures are available for the inclusion of various restrictive clauses in transfer of technology transactions between TNEs and technology recipients in various Group of 77 nations.

One text, Licensing in Foreign and Domestic Operations, deals with warranty provisions in two paragraphs. This is the first paragraph:

A Warranty clause, which may be found before or after the payment clauses, is always a good one to include whenever conditions permit:

Licensor makes no warranty, of any kind whatsoever, either express or implied, as to any patents or any or all of the said methods, processes, techniques, information, knowledge, know-how, trade practices and any secrets communicated hereunder.

A more thorough exculpatory clause is difficult to imagine.

In Current Trends in Domestic and International Licensing—Patents, Trademarks, Trade Secrets, Know-How, and In-

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7 Comment, supra note 83.
9 Eckstrom, supra note 84.
10 Id. at § 6.01 [3][a].

The second paragraph dealing with Warranty Provisions reads as follows:

It is to be understood that such an agreement by the licensee cannot be used to prevent him from making the challenges to the licensed patents and information discussed in Chapters 4 and 6 with respect to Lear v. Adkins and Choisier v. Electronic Vision. (footnote omitted)
two distinguished writers briefly discuss warranties in technology licensing agreements. The first writer sets out a sample license. It contains no warranty clause. His brief discussion of warranties contains the following instructive outline:

Negative warranties—deny warranty of patent validity
—deny non-infringement of third party patents
—Licensor not responsible for licensee operations or injury or explosion or fire (where licensee does the designing and supervises the operations).

A more moderate approach is taken by the second writer, who in his section on “Miscellaneous Provisions” includes the following brief discussion:

1. Warranties.

Probably the safest warranty clause to place in a license agreement is one that merely states that the licensor-patent owner warrants that he has good title to the licensed patents, and that the documents containing the know-how accurately reflect the best judgment of the licensor in the premises, and that no other warranty of any nature is made. There may be specific situations in which a licensee would wish to insist that the licensor make additional warranties, but most licensors are well advised to be wary of entering into specific warranties on intangible, technological property rights. (Emphasis added.)

As we have seen above, under United States law, in the absence of a “sale” under the Uniform Commercial Code of goods of a technological nature, no warranties are implied by law in a contract which contains no explicit warranty provisions. The text writers above suggest the inclusion of clauses in transfer of technology contracts which exclude all warranties, express or implied, by the licensor. If this is the case in the United States, where the bargaining parties are generally at arm’s length, one can legitimately infer that the situation in most transnational transfer of technology agreements is probably worse. Unless the

91 Edited by M. Finnegan and D. Smith (Public Law Institute).
92 D. Smith, “How to”—Corporate Licensing, Domestic and Foreign 11.
93 Id. at 24.
95 Id. at 157.
national legislation of the technology-receiving nation requires it, guarantees are not likely to exist in international transfer of technology agreements. If a "guarantee" clause is to be found, it is likely to simply disavow all guarantees. It would appear from the literature that guarantees are an aspect of transfer of technology agreements that is rarely negotiated. Not only are the parties not at arm's length; it seems that here, as elsewhere, the supplier of technology has a greatly superior bargaining position.

V. POLICY ARGUMENTS FOR THE INCLUSION OF GROUP OF 77 GUARANTEE PROVISIONS IN TRANSFER OF TECHNOLOGY AGREEMENTS

This section of the Note will argue that the Group of 77 guarantee provisions are generally reasonable and should be included in international transfer of technology agreements. Since these provisions are reasonable, it follows that the Group B nations should accept most of these supplier guarantees in the proposed international code of conduct on transfer of technology.

A brief summary of the imperfections of the international technology market is necessary as a preface to the arguments that follow. If the market worked perfectly, presumably there would be no need for international regulation.

A study by the UNCTAD Secretariat summarizes the imperfections in the technology market:

[1] the absence of primary information in developing countries about the relative merits of alternative technologies available and alternative economic opportunities; [2] the complexity and extreme heterogeneity of technology, in contrast to other commodities, making it difficult to price as a commodity; [3] the structure of the market, more monopolistic than product markets, in which technological information is a jealously guarded

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* The assumption is that transfer of technology agreements are consistent in containing clauses which favor the technology supplier:

[for example, out of 451 contracts examined in the Andean Group countries, 319 included export restrictions ...; in Peru, out of 89 contracts, 55 included tie-in arrangements on the purchase of raw materials by licensees; ...]

Egea, supra note 20, at 16-17. If one thinks of a clause denying all guarantees as analogous to these restrictive clauses, it is logical to assume that such a clause would appear with quite some frequency.

* The issue of the legal nature of the code is discussed very briefly in Section I of this Note, supra.

secret and in which the owners of technology are price givers rather than price takers; and [4] the inadequacy of private profit calculations in fully accounting for the benefits to society from the diffusion of skills.99

This section will discuss the arguments for the guarantee proposals, according to the nature of the individual guarantees, in the following order:

(A). guarantees (iv) and (ix), the training of national personnel and the use of locally available resources;

(B). guarantee (viii), spare parts and the like to be supplied for a time without additional charge;

(C). guarantee (v), access to improvements in the technology;

(D). guarantees (vi) and (vii), inputs and output under the supplier's effective control to be traded at world prices or better in respect to the recipient; and

(E). guarantees (i), (ii) and (iii), technology to be suitable for the manufacture of the products covered, to be full and complete for the purpose of the arrangement, and to be capable of achieving a predetermined level of production.

99 Id. at 5, ¶ 19.

As a result of these limitations of the market, price determination for technology is much more subject to the relative bargaining strengths of the parties concerned than it is in the market for commodities in general. Therefore, the case for regulation of markets in which technology is transferred is even stronger than that for regulating commodity markets.

Id. at 5, ¶ 20.

The greatly unequal bargaining power of the parties to the ordinary transfer of technology agreement, i.e., the Group B TNE and the Third World technology recipient, is explained in id. at ¶¶21-23.

Problem [1] in the technology market has been called the “fundamental paradox” and would appear to apply to technological transactions other than those between TNEs and Third World technology acquirers.

In order to buy information, the purchaser must already have some facts as to the characteristics of the desired information, and in the case of technical information, on the available alternatives from other sources. However, experience shows that if the purchaser had this information needed to correctly (or optimally) formulate his demand, he would not need to buy more information. In other words, the technology market would behave “properly” as a mechanism for optimal allocation of resources if the purchaser had information on the knowledge he intended to buy: but the technology that is desired is precisely the body of knowledge necessary to acquire it under rational conditions. This property of the technological market has been called the “fundamental paradox,” after Arrow's (1962) work. In practice, bidding is irrational unless it is based on the information wanted.

Egea, supra note 20, at 12.
A. Guarantees (iv) and (ix)

Guarantees (iv) and (ix) can be characterized by Group B either as an unimportant set of conditions to be considered as cosmetic in nature, or as rather important conditions from both parties' points-of-view, to be carefully discussed, considered and negotiated. In the former case, a strong argument can be made that the two guarantees should be conceded by the Group B negotiators as an unimportant and inexpensive gesture of good will.

It is hoped, however, that the Group B nations will consider these "cosmetic" guarantees as being important, accept the consequences, and agree to them. There are several good reasons for such a course. The first is that increased involvement of national personnel and local resources in the enterprise will improve relations between the technology supplying enterprise and the technology recipient, as well as the recipient's nation and people. Good will is worth something, whether or not its "book value" can be computed.

The second reason is that (ordinarily and within certain limits) it will make good business sense to use local personnel and locally available resources. There would be few cases in which, in the ordinary TNE direct investment, sale or license of technology to a Group of 77 private or government technology recipient, it would be cheaper to import personnel than to hire equally qualified national personnel. Home country personnel, accustomed to Group B nation salaries and comforts, would have to be paid more highly, receive more fringe benefits, perhaps receive benefits such as overseas bonuses in the home nation, be provided with transportation, etc. As for other resources, any TNE with the profit motive foremost will have already investigated the possibility of using locally produced materials, which will often be less expensive than imported goods of the same quality.

The language of guarantee (iv) requires adequate training in "...management techniques of the enterprises." There are two positive aspects to this language from the Group B-based TNE's point of view. First, the language used is "management techniques" and not "management." Thus, within the parameters of the agreement itself and the other provisions of this proposed code of conduct for the international transfer of technology, the TNE is still substantially free to manage its own operations. Second, in being forced to train national personnel in its operation and management techniques, the TNE operating in a Group of 77
nation will be training a group of nationals whose loyalties will lie at least partly with the TNE. That is surely an important sort of investment.

A caveat should be observed here, the arguments above notwithstanding. TNEs will be, and should be, concerned with the enforcement mechanism for these guarantees. TNEs will probably be most unhappy should these guarantees be legally binding and fall exclusively within the jurisdiction of the host nation's government. TNEs are likely to insist upon, and should receive, the right to have input into any disputes arising under these guarantees. Whom they hire and train is of more than passing interest to TNEs, especially as national personnel rise higher and higher within TNE management ranks.

B. Guarantee (viii)

A few remarks will suffice concerning guarantee (viii): spare parts, components and other requirements for using the technology to be provided for a specified period without additional charge to the recipient. First, it makes good business sense for a supplier to have on hand items that the purchaser might need to keep the original purchase in running order. A ready supply not only keeps the purchaser happy; it also keeps him coming back to the seller to do more business. A purchaser of technology who cannot get from the seller what he needs for continued use is likely to take his business elsewhere. A guarantee that the technology supplier provide parts, components and other requirements to the technology recipient promotes the self-interest of both parties.

Also, as was pointed out above,\textsuperscript{100} it would seem more reasonable (and ultimately in the interests of the technology recipient) to change the guarantee to provide for spares and supplies at the "usual prices," \textit{i.e.}, the prices provided for in the agreement, or at "reasonable prices." The present Group of 77 Draft formulation provides for certainty in ultimate technology price at a cost of inflexibility in negotiations and, very possibly, inflated estimates of the technology supplier's costs in providing this guarantee. The approach suggested by one distinguished writer and by the UNCTAD Secretariat requires the supplier to keep on hand stocks of spare parts, components, and the like, and still permits the technology recipient to pay for the goods, at negotiated

\textsuperscript{100} See text at notes 52-54, supra.
or reasonable prices, as he goes. In the amended form, this guarantee amounts to good business and should be easily acceptable to Group B nations and their TNEs.

C. Guarantee (v)

Guarantee (v), providing for the recipient’s access to “all improvements upon the techniques in question during the lifetime of the arrangement,” is a fairly delicate topic. Suppliers are wary of giving away valuable new technology while recipients want the latest and best technology. Nevertheless, consensus on this guarantee seems possible. Moreover, the formulation of the proposed guarantee goes somewhat further than the Group of 77 Draft does in providing technology recipients with access to improvements.

The technology recipients wish to receive information about all improvements, and access to them on reasonable terms. Improvements are here taken to mean technical advances (patents or know-how) which reduce costs or increase production. The supplier, on the other hand, who is by no means averse to further sales, simply wishes to receive a fair price for his improvement. In rejecting the Pugwash Code guarantee on access to improvements, one writer struck a balance which should be acceptable to both the Group of 77 and Group B: “... the licensee should be informed of the improvements and be offered the opportunity to acquire a license to them on reasonable terms.”

An important point should be noted by technology suppliers: the technology recipient is unlikely to have much leverage on the issue of pricing of improvements. Only the technology supplier will have all the information upon which the price can be determined, and in the absence of agreement on price, the supplier will lose nothing. Of course, good faith will require the supplier to set a reasonable price for the improvements.

Thus the following wording, which should be acceptable to both groups, is suggested: “The recipient shall be informed of all improvements upon the technology in question and shall have access to them on fair and reasonable terms during the lifetime of the agreement.”

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101 The Pugwash Code formulation, requiring the supplier to give the recipient the improvements without charge, has been abandoned in the Group of 77 Draft.
102 Note by the Secretariat, supra note 46, at Annex 4.
103 Finnegan, supra note 16, at 106-07.
D. Guarantees (vi) and (vii)

Guarantees (vi) and (vii), requiring the supplier of technology to purchase the recipient's output at "current international price levels" or better, and to sell needed capital goods, intermediate inputs and/or raw materials at "current international price levels" or less, when the supplier stands in a monopolistic or quasi-monopolistic position as against the recipient, have achieved, and would seem able to command, a high degree of consensus. These two guarantees prohibit the large TNE from taking advantage of its dominant position in ancillary sales and purchases. These guarantees also undercut transfer-pricing, which has been one way for the TNE to "re-arrange" profits, infuriating Group of 77 host countries in the process. In his comments on these guarantees, a noted writer states that "[i]f it is necessary for the licensee to acquire materials or capital goods from the licensor or its designee, a requirement that the licensor guarantee that the prices of such materials or capital goods will be comparable to the international market is entirely reasonable."104

Both the writer quoted above and the UNCTAD Secretariat point out that the real problem may be that a monopoly or quasi-monopoly position held by the technology supplier precludes any authentic "international market price" or a "current international price level" for the goods, since the market will be highly imperfect. One possible solution to this problem of pricing is "a standard accounting practice which specifies a formula for pricing such items."105 The Note by the UNCTAD Secretariat similarly contends that it "would be then desirable for the parties to specify in their agreement exactly how the price level is to be arrived at so that future disputes could be avoided."106 As a pricing "perimeter," guarantees (vi) and (vii) should be acceptable to both the Group of 77 nations and the Group B nations.107 Certainly, Group B-based TNEs will find room for profitable activity at "current international price levels" in most commodities.

104 Id. at 106.
105 Id.
106 Note by the Secretariat, supra note 46, at Annex 7.
107 The "guarantees" themselves should, in most cases, be regarded as a "net" below which the parties will not be permitted to fall in their obligations under the agreement.
108 Id. at 9.
E. **Guarantees (i), (ii) and (iii)**

Guarantees (i), (ii) and (iii), that the technology is suitable for the manufacture of products covered by the agreement, capable of reaching a predetermined level of production, and that the technology is "full and complete" for the purposes of the agreement, are grouped together for discussion because they go directly to the basis of the bargain—the suitability of the technology for the purposes of the agreement.

The nature of guarantees (i) and (iii) is aptly summarized in the Note by the UNCTAD Secretariat:

> Some of these "guarantees" relate to basic provisions which are included in the agreement for the sake of certainty in order to ensure that the parties are getting what they are bargaining for. These are provisions of a kind which many legal advisers would in any case insist on introducing into a written agreement. Such provisions may include ... that the technology is in accordance with the terms of the agreement and that it meets the description in the agreement.\(^{108}\)

Since guarantees (i) and (iii) contemplate the technology producing the item and the quantity specified by the agreement, they amount to an elaborated guarantee that the technology corresponds to the description in the agreement. This guarantee is little different from the Group B guarantees proposal, mentioned above, that the technology meets the description in the agreement, and that it is suitable for the use specifically set forth therein.

One author interjects at this point that while a guarantee of the suitability of the technology transferred is reasonable, "the licensor should not be expected to warrant the suitability of technology without some assurance that the licensee will use it properly."\(^{109}\) Two points may be made in response. First, a responsible technology seller or licensor should take care to see that the recipient is capable of properly using the technology. Second, the Group of 77 Draft contains a mandatory provision that the recipient enterprise shall guarantee that "the technology acquired will be used as specified in the arrangement."\(^{110}\) The proposed Group of 77 Draft imposes, in effect, two distinct obligations upon

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\(^{108}\) Id.

\(^{109}\) Finnegan, supra note 16, at 104.

\(^{110}\) U.N. Doc. TD/AC.1/11, Annex II at 13, § 5.2(i).
both parties: first, to live up to the terms of the agreement; second, to negotiate the terms carefully, so that the technology fits the description and its projected production goals, and so that the recipient is able to use the technology precisely as specified in the agreement.

Guarantee (ii) seemingly goes considerably further than (i) and (iii), which stress obligations under a written agreement. Under guarantee (ii), the supplier must guarantee that the technology is "full and complete" for the purposes of the arrangement. Unlike the other guarantees, it binds whether or not the purposes are "specified" in the agreement. Thus if the seller or licensor has reason to know or actually knows of the other party's purposes in making the agreement, a warranty will be implied in the agreement that the transferor's technology is full and complete for the transferee's purposes. There has been little discussion of the "full and complete" requirement. It appears, however, that the Group of 77 Draft intends something very similar to the implied warranty of fitness for a particular purpose.\textsuperscript{111} Given this reading of guarantee (ii), why should Group B and its TNEs agree to it? Perhaps because a satisfied customer is a regular customer.

Other arguments for the inclusion of guarantee (ii) tend to favor the technology recipients rather than Group B interests. A number of helpful analogies may be drawn at this point between consumer transactions and the international purchase or licensing of technology.

First, in both situations, the "consumer" is ignorant. The correct choice of goods is not often apparent; further, the effort necessary to enable the consumer to make an intelligent decision as to what and from whom to buy or license may not be worth the trouble. Second, it will often happen that the various merchants in a given field (whether clock-radios or computers) will not offer the consumer much choice in important terms of the transaction. A consumer buying a blender or taking a bus ride is not likely to be able to effectively negotiate any of the terms of his "agreement" with the manufacturer or the bus line. The prospective technology

\textsuperscript{111} The implied warranty of fitness for a particular purpose, § 2-315 of the Uniform Commercial Code, reads as follows:

Where the seller at the time of contracting has reason to know any particular purpose for which the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods, there is unless excluded or modified under the next section an implied warranty that the goods shall be fit for such purpose.
transferree often faces a similar situation. Third, not only will the consumer have difficulty in negotiating important terms and conditions, but he/she will find those included in the "agreement" to be odious. Finally, sellers and licensors are motivated by self-interest. Hopefully, self-interest will often meld with interest in the consumer's welfare. However, the thrust of consumer protection legislation is to restrain businesses and to protect the purchasers in consumer transactions. Such legislation seeks, by means of protections fixed by law, to improve the position of the consumer. There is a clear need for similar protection of technology recipients. Group B and its TNEs are not likely to make concessions in this area unless pressured to do so.

Due to the technology owner's superior knowledge and bargaining power, and to the recipient's involuntary trust in the technology supplier, a guarantee of fitness for a particular purpose is warranted in this proposed international code of conduct for the transfer of technology. It is primarily in the recipient's interest, not in the technology owner's interest. It would be an important step in redressing the inequities in the current system of technology transfer, and would greatly assist in the task of equalizing the bargaining positions of the parties to an international technology transfer transaction.

CONCLUSION

With the changes proposed above to guarantees (v) and (viii), the Group of 77 Draft proposals for guarantees to be made by the technology supplier to the recipient should be accepted by Group B. They are reasonable, and represent thoughtful responses to some of the problems extant in the present transfer of technology system.

Politically, there would be a number of benefits for Group B, especially the United States, in accepting the Group of 77 guarantee proposals. An acceptance would mean progress in the faltering North-South Dialogue. It would represent a more serious First World commitment to the principles of the New International Economic Order. Surely, such acceptance would be less expensive, in terms of both domestic political and financial costs, than promising and delivering one percent of Group B nation Gross National Product in direct aid to developing countries.

Such acceptance of Group of 77 proposals would be a gesture of good will, and would be recognized as such. It would make it clear
that Group B nations are becoming more serious about honoring their pronouncements on development.\textsuperscript{112}

The improved relations between Group B and the Group of 77 would lead to greater international political stability and cooperation in other fields. An agreement on an entire code of conduct (especially a crucial section on restrictive business practices) might very well lead to a drastic improvement in the overseas investment climate.

Finally, Group B can afford to be generous and ought to be generous. It could be that a small gesture such as this, along with other small gestures, will have a real effect in making our planet one on which goods and services are allocated more and more equitably.

Naturally, the converse of these arguments is that without agreement there will be hard feelings. Relations between Group B (and their TNEs) and the Group of 77 may worsen. The Group of 77 could be sheer force by numbers compel the adoption of a code which Group B would consider totally unacceptable. More restrictive national and regional transfer of technology codes would be a certainty.

From the TNE's point of view, the probable effects of accepting the Group of 77 guarantee proposals provide one with arguments in favor of acceptance. Inevitably, the price of technology will rise. But Group of 77 technology recipients are likely to understand that guarantees cost the technology supplier something. Aside from this, however, it seems probable that the dollar investment level will rise steeply due to better overall First World-Third World relations and the greater certainty for the investor/transferor provided by an international code of conduct. The acceptance of guarantees might also be thought of by TNEs as an investment in good will. Finally, the TNE's corporate duty to its shareholders mandates acceptance of the guarantee proposals since, as noted above,\textsuperscript{113} most of the guarantees are good business practices anyway.

In answer to the argument that guarantees should not be rigidly written into all transfer of technology agreements, but should instead be an item which is bargained for, it is to be observed that the present practice in such agreements is also


\textsuperscript{113} See Section V, \textit{supra}.
rigid. Guarantees are either not mentioned or they are excluded. The purpose of the negotiations for a code is to alter the status quo in favor of the technology recipient.

It is recommended then that the Group B nations, led by the United States, agree to these proposals as a sensible, fair and relatively inexpensive way to improve the bargaining position of the technology recipient in international transfer of technology transactions. "Few things can be done to help the developing world which don't hurt the developed world. This is one of them."¹⁴

Kevin Conboy

¹⁴ Interview with Professor Dennis Thompson, Visiting Professor of International Law at the University of Georgia, in Athens, Georgia (November 1, 1978).
ADDENDUM

The results of the 7th plenary meeting of the United Nations Conference on an International Code of Conduct on the Transfer of Technology have recently been published. Alterations have been made in style and organization. Few changes in substance have been made, however, and the disputes will remain between Group B and the Group of 77. This addendum will briefly explain the altered scheme of the Guarantees Chapter (see chart below for renumbering) and the few substantive changes made, according to the grouping of guarantees in Section V of this Note.

Both the Group B and the Group of 77 tests are now divided into responsibilities of parties at the negotiating phase and responsibilities of parties at the contractual phase. The Group of 77 text also includes subsections on Consideration for the technology transferred, Liability and Guarantees that governments may require. Most of the guarantees required of the technology supplier

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116 New Numbers—U.N. Doc. TD/CODE TOT/10

117 It should be noted that the operative verb is still shall (mandatory) for the Group 77 text and should (persuasive) for the Group B text.
discussed in this Note are now found in §4 of the Group of 77 text (Contractual Phase).

A. Guarantees (iv) and (ix), concerning the training of national personnel and the use of locally available resources are now covered in a single provision at the negotiating phase;\textsuperscript{118} national personnel training is covered in a contractual phase guarantee,\textsuperscript{119} and the use of locally available resources has been relegated to the section, Guarantees that governments may require, in three separate clauses covering local technical skills, local inputs, and local technology.\textsuperscript{120} Two alterations have been made in the formulations of the training of local personnel guarantee: "management" training has been deleted, and "where so required by the acquiring party" has been added.\textsuperscript{121}

B. On guarantee (viii), the Group of 77 has conceded. The formulation found in the contractual phase of the Chapter now requires that spares, replacement parts, etc. be supplied, as required, "at usual prices and for the period specified in the agreement."\textsuperscript{122} The wisdom of this change is not to be doubted. It clearly casts upon the parties the obligation to discuss and resolve the issue of spares, their prices and length of availability.

C. Guarantee (v), access to improvements, is also found in the Contractual Phase subsection. It has been altered only slightly to provide for access to technological improvements during the lifetime of the agreement or "for a specific period."\textsuperscript{123} The latter clause is new and allows the parties more flexibility in bargaining; the effect, though, is to put the burden on the supplier if the supplier wants to shorten the period of time during which recipients shall have access to improvements.

D. The provisions concerning the pricing of inputs and outputs under the supplier's effective control, (vi) and (vii), are substantially unchanged in effect: the standard is still "current world

\textsuperscript{118} The supplying party shall be responsive to economic and social development objectives, including those "concerning the utilization, to the maximum extent practicable, of materials, technology and personnel available in the recipient country, including local technical skills and consultancy organizations." Documents of the Conference, \textit{supra}, note 115 at 30, § 2.(a).

\textsuperscript{119} \textit{Id.} at 33, § 4.(ix).

\textsuperscript{120} \textit{Id.} at 35, § 10.(ii), (iii) and (v).

\textsuperscript{121} \textit{Id.} at 33, § 4.(ix). \textit{See also} Section V.A. of this Note, \textit{supra}.

\textsuperscript{122} Documents of the Conference, \textit{supra}, note 115 at 33, § 4.(x).

\textsuperscript{123} \textit{Id.} at 32, § 4.(i).
prices.""\textsuperscript{124} However, some qualifying language has been added. Prices shall also be "reasonable and fair," and current world prices are those which are for "goods of the same quality sold on comparable commercial terms and conditions."\textsuperscript{125}

E. Guarantees (i), (ii) and (iii), that the technology be suitable for the manufacture of products covered, \textit{that it be full and complete}, and \textit{that it be capable of reaching a predetermined level of production}, have all been re-worded. Guarantee (ii), that the technology be "full and complete," is now "complete and correct."\textsuperscript{126} Guarantee (iii), that the technology be capable of achieving a predetermined level of production, has been changed to a guarantee that the "use of the technology will ensure the achievement of a predetermined result."\textsuperscript{127} This broader language is apparently intended to encompass forms of technology in which nothing is "produced."

Finally, guarantee (i), that the technology be "suitable for the manufacture of products covered by the arrangement," has also been broadened to a guarantee that the technology be "suitable for the the purpose agreed upon by the parties."\textsuperscript{128} The caption for this guarantee is Suitability for use, which resembles the Group B formulation (vi)(b),\textsuperscript{129} and the UCC Implied Warranty: Fitness for Particular Purpose.\textsuperscript{130} It will be interesting to see, in the months and years of negotiations ahead, whether this appropriate warranty can form the basis of a broader agreement between Group B and the Group of 77 on guarantees to be made by technology suppliers.

\textsuperscript{124} Id. at 34, §§ 6. and 7.
\textsuperscript{125} Id.
\textsuperscript{126} Id. at 33, § 4.(viii).
\textsuperscript{127} Id. at 33, § 4.(vii).
\textsuperscript{128} Id. at 32, § 4.(iv).
\textsuperscript{129} See text at notes 56-59, supra.
\textsuperscript{130} See text at notes 42-43, supra.