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DEAN SPEAKS

I AM very happy to place in your hands Volume 14 of the Law Faculty Journal, *Delhi Law Review*, the 3rd issue which has appeared during my term as Head and Dean of the Faculty of Law.

During the period between Volume 13 (1991) and this issue, I am happy to report that we organised a very successful 5-day National Workshop on Teaching Intellectual Property Law (October 21-25, 1991) which was attended by 40 Law Teachers from all over the country. This workshop was sponsored by the World Intellectual Property Organisation (WIPO), a specialised agency of the United Nations, based in Geneva, and financed by the Ministry of Human Resources Development, Government of India. WIPO brought here four eminent foreign Professors from U.S.A., U.K., Australia and Thailand, to act as faculty besides six of us from Delhi Law School and two from other Law Schools of India. I am happy to report that the standard of discussions at the Workshop was so high that Professor Karl F. Jorda from U.S.A. acknowledged in his concluding statement which was recorded by us that he never attended a Workshop/Seminar where discussions were of such high order. WIPO also sent two of its Directors, Mr. Francis Gurry and Mr. N.K. Sabharwal and the Director-General of WIPO wrote to me after the Workshop admiring the Workshop in glowing terms.

The Workshop resolved as follows:

I. To recommend to all Universities in India to include:

- (i) a foundation course (whether compulsory or elective) in intellectual property in their LL.B. Curriculum of a full academic year's duration with a view to affording their students an opportunity to acquire basic knowledge of the legal protection of creative works of the human intellect, such as copyright, patents and designs;
 - (ii) advanced courses in intellectual property in their postgraduate and doctoral programmes in law with a view to promoting specialisation and research;
- and that the curriculum in these courses should place sufficient stress on the international regime and the treaties and conventions administered by the World Intellectual Property Organisation.

II. To request the World Intellectual Property Organisation to extend support for the introduction of intellectual property studies in Indian universities by providing library materials and for the training of teachers.

III. To establish a National Association for the Promotion of Intellectual Property Education with the participants in the Workshop as its Founding Members and Professor P.S. Sangal, Dean, Faculty of Law, University of Delhi, as its interim President, to take necessary steps to set up the Association.

Work on all of the aforesaid three recommendations is progressing. Our efforts to give a new look to our LL.M. syllabus continued during this year also and we were able to introduce two more optional Papers into our LL.M. syllabus. These two Papers are 'Hindu Jurisprudence' and 'Specific Torts'.

In the end, I must thank my former student and colleague Dr. (Mrs.) Nomita Aggarwal, the learned Convenor of the Editorial Committee, who worked relentlessly to make this venture a success.

June 15, 1992

PROFESSOR P.S. SANGAL
Head of the Law Department and
Dean, Faculty of Law

EDITORIAL

THE United Nations Conference on Environment and Development in Rio de Janeiro which ended on June 14, 1992 was to consider the most fundamental issue facing the world community today: *How to reconcile human activities with the laws of nature.*

While it was the United Nations itself which called this conference, its midwife was an independent Commission which set out in 1984 to formulate nothing less than a global agenda for change.

The report of the World Commission, issued in 1987, was named *Our Common Future*, to capture what they came to realize: "whether we live in affluence in an industrialized country or whether we belong to the 1.2 billion people who live in absolute poverty, we are all neighbours in an interlinked world." They coined the concept of "sustainable development" and were unanimous in focusing on the international economy as a force multiplier that needed major change. They found a desperate need for a more equitable distribution of wealth and opportunity, both between countries as well as within countries. They also found the only sane policy to be one of international burden-sharing between rich and poor countries in which debt relief, development assistance, transfer of environmentally sound technology as well as a general climate conducive to investment were key components.

The World Commission on Environment and Development was convened again for three days, April 22-24, 1992 in London and formulated what they thought to be "Clear and unavoidable next steps, most of which should be taken at Rio." We give below some extracts of these steps:

As a minimum step, all countries must provide opportunities for couples to exercise freely their human right to determine the number and spacing of their children.

Necessary but not sufficient conditions for sustainable development include prices which reflect full environmental costs and implementation of the Polluter Pays Principle.

Trade must be open to all, particularly to developing nations.

The debt burden is retarding and distorting development; a further writing down of commercial bank debt is also unavoidable and overdue.

We appeal to governments to conclude for signature in Rio a Climate Convention which contains agreed goals, targets and timetables, funds committed to achieve those targets, and operational machinery to implement and enforce them.

As regards the convention on biodiversity, differences over access to genetic resources and relevant bio-technologies should be reconciled. The issue at stake is survival.

Unfortunately, the Rio Conference could not achieve much in this direction. But at the same time it could not be said that the Rio Conference is a failure because 153 nations have signed two framework conventions: one on committing countries to initiate methods to slow down the process of global warming and the other to preserve the diversity of the world's living organisms. Also 700-plus page blueprint on Agenda 21 for charting the course of the earth towards sustainable development in the 21st century have been agreed.

The most important failure of the Rio Conference in our opinion is the absence of decision on the "Polluter Pays Principle" which, we have been expecting,* would be the necessary outcome of the Rio Conference.

June 15, 1992

PROFESSOR P.S. SANGAL
Editor-in-Chief

IMPLEMENTING SUSTAINABILITY*

BEN BOER**

I. INTRODUCTION

STRATEGIES FOR sustainable development have been formulated in many countries in the past several years. Their implementation through legal and administrative mechanisms is underway on a national and regional basis. The impetus for these strategies has come from documents such as the Stockholm Declaration of 1972,¹ the World Conservation Strategy,² the World Charter for Nature of 1982³ and the report of the World Commission on Environment and Development, *Our Common Future*.⁴ The initiatives are part of a world wide movement for the introduction of National Conservation Strategies based on the World Conservation Strategy. Over 50 National Conservation Strategies have been introduced over the past decade, all of which incorporate concepts of sustainable development. The document *Caring for the Earth* is the chief successor to the World Conservation Strategy.⁵ It includes a wide range of recommendations for legal and institutional reform.

* This article was originally delivered as a paper to the NATIONAL ENVIRONMENTAL LAW ASSOCIATION and LAWASIA "Environmental Responsibility Across International Boundaries"; Second International Conference on Environmental Law, Bangkok, 4-7 August 1991. I am grateful to my colleagues, Donna Craig, John Connor, and Benjamin Richardson for their comments on an earlier draft of this article. Any deficiencies remain my own responsibility.

** Corrs Chambers Westgarth Professor of Environmental Law, Faculty of Law, University of Sydney, New South Wales, Australia.

1. The Stockholm Declaration was part of the statement published by the United Nations Conference on Environment and Development in 1972, later adopted by the General Assembly of the United Nations (Res 2994, December 1972).

2. Prepared in 1980 by the IUCN (World Conservation Union), with advice and assistance from the United Nations Environment Programme and the World Wide Fund (now known as World Wide Fund for Nature).

3. UNGA Res 37/7.

4. Also known as the Brundtland Report, Oxford 1987; the references to the report in this article are drawn from the Australian edition of this report, Oxford (1990); hereafter cited as WCED. For an update on developments since the Brundtland Report was completed see *Starke Signs of Hope*, Oxford (1990).

5. *Caring for the Earth: A Strategy for Sustainable Living*, IUCN, UNEP and WWF, Gland 1991 (hereafter cited as IUCN 1991) was developed by the Second World Conservation Strategy Project, comprised of representatives of the World Conservation Union, United Nations Environment Programme and World Wide Fund for Nature, with sponsorship and collaboration from a number of international aid agencies, national governments, banks and international environmental organisations.

In recent years the role of international environmental law has increased considerably, with many multilateral and bilateral instruments relating to the environment being concluded.⁶ On a national level, environmental legislation has been developed in many countries. The status of national legislation is beginning to be regularly reviewed, often with the assistance of international agencies. National legislation and plans for regional action and information exchange on laws and institutions are now being collected more systematically, and the legislation is also being made available to other countries.⁷ In the past two years, countries participating in the United Nations Conference on Environment and Development have also produced comprehensive national environment and development reports.⁸ This Conference is intended to have six major outputs: the drafting of international conventions on issues of global importance, preparation of the "Earth Charter", (declaring the principles by which people should conduct themselves in relation to each other and their environment), "Agenda 21", which is meant to be a programme of action for the implementation of the principles of the Earth Charter, the development of financial mechanisms for lower income countries⁹ for the funding of obligations arising out of conventions, opportunities for technology transfer, and the strengthening of institutions dealing with environment and development issues.¹⁰

Although the focus in this article is on lower income countries, references are of necessity made to higher income countries which have the

6. See Koester, "From Stockholm to Brundtland", *Environmental Policy and Law*, 20/1/2 (1990) 14.
7. This legislation has been and continues to be developed partly as a result of the technical assistance provided by the United Nations Environment Programme, the South Pacific Regional Environment Programme and international non-government organisations such as the World Conservation Union's Environmental Law Centre in Bonn; see further, *The Implementation of the Montevideo Programme for the Development and Periodic Review of Environmental Law 1981-1991: An overview*, Environmental Law and Institutions Unit, United Nations Environment Programme, Nairobi.
8. The Conference is scheduled for June 1992 in Rio de Janeiro; this Conference is also referred to as the "Earth Summit"; see *Network '92*, February 1991, published by the Centre for Our Common Future, Geneva at 1.
9. Framework Conventions on the Conservation of Biodiversity, for the Protection of the Atmosphere and on Environment Protection and Sustainable Development have been proposed.
10. The terms "lower income countries" and "higher income countries" are generally employed here, rather than the more value-laden terms such as "developing countries" and "developed countries". This is in conformity with the philosophy of the publication *Caring for the Earth* *supra* note 4 at 11: "With the adoption of broader concepts of development, reflecting social and ecological as well as economic conditions, conventional classifications of countries as 'developed' or 'developing' have become less useful". In any case, some nations that are thought of as "developed" can in reality be more correctly characterised as "overdeveloped", with regard to the exploitation of natural resources.
11. *Network '92*, March 1991 at 1.

potential, both through foreign aid and through export of technical expertise, to contribute to achieving ecological, social, cultural and economic sustainability. Whilst lower income countries generally need to implement sustainability policies urgently, it must be recognised that the higher income countries have contributed to that urgency through inappropriate private investment, foreign aid and development activity which have not always been appropriate to the needs or environments of lower income countries.

The imperative of introducing strategies for sustainability is of course no less strong in higher income countries than in lower income countries. The rate of energy use and the consumption of non-renewable resources is much greater in most higher income countries than it is in the lower income countries. Thus although the environmental effects of population growth are a very significant factor in the sustainability debate, it is as well to remember that the effect of an increase by one human being in the population of a higher income country can be much greater than the effect in a lower income country.¹²

The use of the term "sustainable development" has been subject to much discussion and criticism. It is probably more desirable to speak in terms of "sustainability" than in terms of "sustainable development", in order to avoid the exploitative connotation in the unexamined use of the word "development". However, because "sustainable development" is entrenched in the literature, the terms are used interchangeably here. The definition of these terms is further explored in Part II.

The introduction of sustainable development strategies should be seen in the context of a number of other major international initiatives in the environmental sphere, particularly the activities associated with the Earth Summit. Further, there are increasingly stringent protocols being introduced for the Vienna Convention on the Protection of the Ozone Layer (1985). These initiatives are all related to sustainability of the Earth in the broadest sense.

The factors involved in long-term change include a drastic reorientation and downturn of natural resource consumption, the curbing of population growth in both higher and lower income countries, the transformation of agricultural practices and forestry management, the equitable distribution of resources, and the maintenance of ecological integrity and diversity.

Strategies for sustainability, whether through National Conservation Strategies or by more limited means, cannot be introduced overnight. Experience in many countries suggests that it can take a number of years for civil servants, politicians and the general community to get

12. For example, the average person in an industrial market economy uses more than 80 times as much energy as someone in sub-Saharan Africa: WCED *supra* note 4 at 14.

used to these new concepts, and to change policies, administrative procedures, attitudes and consumption patterns. The mere enactment of a few environmental statutes and introduction of policy changes can do little without a broad and comprehensive educational and action programme. In addition, whilst legislation and policy are the vehicles of implementation, change will not occur without political commitment and hard decisions. Political commitment to effect change involves the development of a "culture of sustainability" which recognises the inextricable relationship between ecological, cultural, social and economic elements.

At an international level, this "culture of sustainability" may eventually set standards of environmental behaviour to which governments and transnational corporations will be expected to conform. It has been said that the concept might "turn into a mandatory standard of international legal evaluation, a pre-emptory norm of international law".¹³ It may also have some profound effects on the way we think about territorial sovereignty.¹⁴ At a local level, the "culture of sustainability" may mean that the participation of local communities in environmental decision-making will assume an even more fundamental significance, both in terms of practical and ethical considerations. Without consensus at the community level, local governments are less likely to implement basic strategies for reduction, re-use, and recycling of consumables,¹⁵ let alone the planning of ecologically appropriate living spaces.¹⁶

II. THE DIMENSIONS OF SUSTAINABILITY

A. History and definitions

"Sustainable development" has become a buzz phrase of the late 80's and early 90's.¹⁷ However, the concept of sustainable use of the earth's resources is an ancient one. Without the principle of sustainability as a way of life, humans would not have survived into the twentieth century.¹⁸ With the advent of industrialisation and colonisation, both

13. Handl, "Environmental security and global change: the challenge to international law", 1 YBIEL at 25 (1990).

14. See eg Piddington "Sovereignty and the Environment", 31 (7) *Environment* at 18 (1989); also Handl, *supra* note 13 at 31.

15. Boer, "Sustainable Development and the Business Community: The Challenge of the 1990s", *Australian Construction Law Newsletter*, No 18 at 25.

16. Bhabha, local communities to care for their own environments is one of the principles for a sustainable society spelled out in *Caring for the Earth*, IUCN 1991 *supra*, note 5 at Ch 7.

17. Pearce, Barbier and Markandya, *Sustainable Development: Economics and Environment in the Third World*, Earthscan 1990, ix.

18. In ancient Greece for example, provincial governors were rewarded or punished according to the look of the land. Signs of environmental damage could lead to admonishment or even exile: see Hughes, "Gala, an ancient view of our planet", *The Ecologist*, 13 (2, 3) (1983) and see O'Riordan, "The Politics of Sustainability".

external and internal, indigenous subsistence lifestyles have been in steep decline. In many countries, colonial powers have effectively destroyed sustainable practices and imposed regimes of land, use and agricultural management unsuitable for the culture, the climate and the ecosystem, leading to land degradation and the depletion of natural resources. The principle of sustainability remains the same today, but technology has extended the carrying capacity of local and global environments to a vast extent; however, the limits to growth seem clearly to have been reached in many countries.

Sustainable development was introduced more broadly into the environmental debate in the 1970's, by the World Conservation Strategy, although the idea was contained in the Stockholm Declaration of 1972. The concept was popularised by the Brundtland Report¹⁹ and was further developed in *Caring for the Earth*.²⁰

The Brundtland Report defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".²¹ The Brundtland argument that sustainable development must mean an integration of economics and ecology in decision-making at all levels, rather than that those two terms be put in opposition to each other²² is in essence an extension of the prescription of the World Conservation Strategy of 1980 relating to the integration of conservation and development.

"Conservation" was defined by the World Conservation Strategy as "the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations". "Development" was defined to mean "the modification of the biosphere and the application of human, financial, living and non-living resources to satisfy human needs and improve the quality of life".²³

Despite the general use of the term, sustainable development is widely misunderstood and often inappropriately applied. Some groups representing development interests refer to the concept as if it means only sustainable economic development. Different interest groups assume different meanings according to their orientation:

Although originally intended by the WCED as a concept that

in Turner, (ed) *Sustainable Environmental Management: Principles and Practice* Westview Press (1988) at 31 *et seq*, which includes a brief historical account of the concept of sustainability.

19. WCED *supra* note 4.

20. See *supra* note 4.

21. WCED *supra* note 4 at 87.

22. Gro Harlem Brundtland, in Pearce, Markandya and Barbier, *Blueprint for a Green Economy* (A report for the United Kingdom Department of the Environment), Earthscan Publications, London, 1989, 175; the Annex to the book incorporates a wide range of definitions of sustainable development.

23. See *supra* note 2.

would *integrate* the apparently conflicting goals of economic development and ecological integrity, sustainable development has become a convenient and attractive euphemism for a range of diverging political and economic agendas that have changed very little in the wake of the Brundtland Report.²⁴

Caring for the Earth notes that the Brundtland Report's definition of sustainable development has been criticised:

as ambiguous and open to a wide range of interpretations, many of which are contradictory. The confusion has been caused because "sustainable development", "sustainable growth" and "sustainable use" have been used interchangeably as if their meanings were the same. They are not. "Sustainable growth" is a contradiction in terms: nothing physical can grow indefinitely. "Sustainable use" is applicable only to renewable resources: it means using them at rates within the capacity for renewal.²⁵

'Sustainability' is defined in *Caring for the Earth* as "a characteristic or state that can be maintained indefinitely,"²⁶ whilst 'development' is defined as "increasing the capacity to meet human needs and improve the quality of human life. What this seems to mean is 'to increase the efficiency of resource use in order to improve human living standards'".

In *Caring for the Earth*, the term "sustainable development" is derived from a rough combination of these two definitions:

Improving the quality of human life while living within the carrying capacity of supporting ecosystems.²⁷

However, this definition also seems unsatisfactory. It is anthropocentric and utilitarian, treating the environment simply as a resource for the exploitation of humans.²⁸ It appears to assume that supplying higher material benefits leads automatically to the satisfaction of human needs. It is not difficult to argue that many of those living in higher income countries would benefit from a decreased material standard of living, which might well lead to an increased quality of life.²⁹ Such a recognition might also lead to a greater transfer of material resources to countries where the material standard of living indeed needs to be raised. How-

24. Eckersley, "The concept of sustainable development", in Behrens and Tasmenny, (eds), *our Common Future*, Law School, University of Tasmania, (1991) at 46.

25. IUCN 1991 *supra* note 5 at 10.

26. *Supra* note 4 at 211.

27. *Supra* note 4 at 10.

28. See Boer, "Social Ecology and Environmental Law" (1984) *Environmental and Planning Law Journal* 233, for an explanation of some of these concepts.

29. See further, Gorz, *Ecology as Politics*, South End Press 1980, Boston.

ever, this transfer is not easy to achieve while power imbalances remain as they are in both higher and lower income countries.

Pearce et al., in their book *Sustainable Development*,³⁰ conceive of "development" in more particular terms. They take it to be a *vector* of desirable social objectives, or a list of attributes which society seeks to achieve or maximise. They state that elements of such a vector might include:

- increase in real income per capita
- improvements in health and nutritional status
- educational achievement
- access to resources
- a "fairer" distribution of income
- increases in basic freedoms.

They suggest that sustainability be defined as the general requirement that a vector of development characteristics be "non-decreasing" over time, where the elements to be included in the vector are open to ethical debate and where the relevant time horizon for *practical* decision making is indeterminate outside of agreement on intergenerational objectives. They maintain that although this level of generality may seem unsatisfactory, the essential point is that what constitutes development and the time horizon to be adopted are both ethically and practically determined.³¹

B. Australian and Canadian Concepts of Sustainable Development

(i) *Australia*

These various definitional dilemmas are addressed in an Australian Government discussion paper, *Ecologically Sustainable Development*, which places a gloss on the concept by prefacing it with the word "ecologically":

Ecologically sustainable development means using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained and the total quality of life, now and in the future can be increased.³²

This definition is less specifically anthropocentric, but does not deal with the issue of how to judge when "ecological processes" can be considered to be maintained. There is also a direct implication that the total quality of (apparently) human life must necessarily be increased.

30. Pearce et al *supra* note 17.

31. Pearce et al *supra* note 17 at 2-3.

32. *Ecologically Sustainable Development* a Commonwealth Discussion Paper, Australian Government Publishing service, Canberra 1990.

The ideology of the logic of "improvement" is measured by increases in human material living standards is much the same as that in the *Caring for the Earth* definition. Fortunately, other parts of the document make it clear that there is a genuine concern for the inherent value of the environment as well.³³

The Australian Conservation Foundation and others published a critique of the Australian Government's discussion paper in 1990, charging that the framework adopted for defining ecological sustainability was conceptually flawed.³⁴ It stated that the principles developed in the discussion paper were not sufficient or adequate to achieve ecological sustainability, leading to a biased analysis. In particular it argued that the paper seeks to integrate environmental concerns where these are reconcilable with economic demands, but where they were not reconcilable they were to be sacrificed to ensure present and future economic benefits. Further, the Foundation's paper stated that there was an assumption that only marginal changes were needed to economic policy to achieve ecological sustainability. In its conclusion to the critique of the Government's Discussion Paper, the Foundation stated that "there should be little serious debate over whether or not ecological sustainability is desirable. Instead, the major argument should focus on the pace and rate of adjustment which will be needed in the economy and in our lifestyles to bring our community into an ecological balance with its environment."³⁵

The Australian Government's discussion paper has been the basis for the establishment of a range of working groups for each of the main economic sectors in Australia which use or have a significant impact on natural resources. These groups involved representatives of government, development interests, union and conservation groups as well as public servants representing the Australian States. The working groups covered the areas of agriculture, fisheries, forestry, manufacturing, mining, tourism, transport, energy use and energy production. The task for each working group was to "identify the most important problem areas, set some priorities for achieving the changes desired, to develop solutions that meet both environmental and economic goals, and to propose time frames for change that take account of the Government's social justice policies and Australia's role in the world economy". The process also involved addressing issues of competition for land, land management, marine problems, waste minimisation, recycling and the use of chemicals.³⁶

33. See IUCN 1991 *supra* note 5, Chapter 2, "Respecting and caring for the community of life".

34. Hare (ed), Matlow, Rae, Gray, Humphries and Ledger, *Ecologically Sustainable Development: A submission*, Australian Conservation Foundation, Greenpeace (Australia), The Wilderness Society and World Wide Fund for Nature—Australia, Australian Conservation Foundation 1990, at xiv.

35. *Supra* note 35 at 86.

36. See *Ecologically Sustainable Development Working Groups Final Report—Executive Summaries*, Australian Government Publishing Service, November 1991, at vi.

It is becoming clear in Australia at least, that conservation and industry groups are becoming more mature in their approach to environmental matters, as evidenced by the process put in place through the Ecologically Sustainable Development Working Groups generally,³⁷ and that the possibilities of negotiating agreements either by way of "round tables" or through various forms of environmental dispute resolution is a practical way of coming to grips with sustainability.³⁸

(ii) Canada

In Canada, the federal government has established a branch within Environment Canada to deal specifically with sustainable development.³⁹ In addition, both federal and provincial governments have set up Round Tables on Sustainable Development, including representatives from government, industry, conservation groups and academic institutions.⁴⁰ In a 1990 workshop organised by that branch,⁴¹ it was suggested that to be sustainable, development must meet three fundamental and equal objectives:⁴²

an economic objective: the production of goods and services. The overriding criterion in fulfilling this objective is efficiency;

an environmental objective: the conservation and prudent management of natural resources. The overriding criterion here is

37. In the past decade, extremely bitter disputes have erupted in relation to environmental and resource decisions in Australia: see further, Boer "Natural Resources and the National Estate" (1989) 6 *Environmental and Planning Law Journal* 134 and Boer, "World Heritage Disputes in Australia" (forthcoming 1992, *Journal of Environmental Law and Litigation*).

38. A specific example of this maturity is the "Salamanca Process" in Tasmania in 1989 and 1990, which saw industry, government, unions and conservation groups come together to agree on what parts of Tasmania could be logged and what parts should be protected from timber-getting. This process fell apart in late 1990; however the lesson was that there was an ability to achieve an agreement in principle in what had been a highly polarised and politicised environment. There are numerous other examples in Australia and overseas of successful environmental dispute resolution; see Boer, Craig, Handmer and Ross, *The Use of Mediation in the Resource Assessment Commission Inquiry Process*, Consultants Report to the Resource Assessment Commission, Canberra, Australian Government Publishing Service, (1991).

39. Sustainable Development and State of the Environment Reporting Branch, Environment Canada; see *Sustainable Development*, Newsletter published by the Canadian Wildlife Service, Environment Canada.

40. See for example, *Reaching Agreement: Consensus Processes in British Columbia*, Report of the Dispute Resolution Core Group of the British Columbia Round Table on the Environment and the Economy, (1991).

41. *Implementing Sustainable Development: Report of the Interdepartmental Workshop on Sustainable Development in Federal Resource Departments*, Sustainable Development and State of the Environment Reporting Branch, Corporate Policy Group, Environment Canada, June 1990.

42. Presumably "equal" here means "equally important"; however, there is still a question whether it is possible to equate economic, environmental and social objectives.

the preservation of biodiversity and maintenance of biological integrity;
 a social objective: the maintenance and enhancement of the quality of life. Equity is the main consideration in meeting this objective.⁴³

It was emphasised that it was necessary to translate the definition of sustainable development into operational terms for the purposes of policy and programme development, because managers and policy analysts will otherwise be reluctant to change legislation, regulations and policies or to modify management and decision making processes. In addition, practical guidance was necessary to integrate environmental considerations into economic decision making, in terms of what environmental factors were relevant, what weight they should be given, when they should be considered, what policy instruments should be applied and what evaluation criteria should be used to gauge success. Three key questions were identified in clarifying the environmental and economic "trade-offs" (assuming that they should be traded-off, in itself a questionable proposition). These were:

- (1) *What is to be sustained?* (the family farm? the income generating capacity of the land? the level of soil nutrients? the biological diversity of the ecosystem?)
- (2) *Over how long is the activity to be sustainable?* (a few years? several decades? in perpetuity?)
- (3) *Over what area is sustainability to be sought?* (a community? a region? the country? globally?)

Although these questions were asked in the context of Canada, they are broad enough to be generalised to other countries. Similarly, the principles developed by the workshop are a useful general checklist for implementing the concept of sustainability:

- (1) informed decision making that routinely integrates environmental considerations into economic policies and strategies as early as possible in the decision process
- (2) the anticipation and prevention of environmental problems
- (3) holistic planning and management of the environment in terms of all the functions derived from the environment
- (4) full-cost accounting that incorporates environmental cost into prices
- (5) living off the interest of natural assets

43. Sadler, presentation to workshop, see *supra* note 41.

44. *Supra* note 39 at 2-3.

- (6) prudent management of non-renewable resources
- (7) emphasis on the quality of economic "development" over the quantity or rate of "growth"
- (8) the building of partnerships among "stakeholders" (government, the private sector and consumers)
- (9) the meeting of basic human needs and aspirations (recognising that poverty is a major cause of environmental degradation world-wide and an obstacle to environmentally sound economic development)
- (10) planning and analysis should be conducted on an ecosystem basis
- (11) the promotion of ecological, social and economic diversity
- (12) the fair sharing of costs and benefits.⁴⁵

However, while the principles are attractive, they do not attempt to address in any fundamental way the paradigm of economic growth and the constant striving for increased material riches. The Canadian *Green Plan*,⁴⁶ the centrepiece of Canada's federal environmental policy, published in 1990, does not fare much better in this respect. The *Green Plan* sets out a number of principles which attempt to address the integration of economic and environmental aspirations. These principles include the efficient use of resources, responsibilities shared between federal and provincial governments, informed decision-making through effective public participation and the adoption of an integrated approach to environmental issues. As expressed in the *Green Plan*, these do not seem to be the stuff out of which national policies can be made. The document clearly needs a great deal more substance, particularly in terms of the processes of legislative and administrative implementation.⁴⁷

B. Economics and sustainable development

(i) *The meaning of economic growth*

In recent times, there has been a good deal of discussion of the meaning of economic growth in the context of sustainable development

45. *Supra* note 44 at 3-4.

46. *Canada's Green Plan*, Ministry of Supply and Services, Canada, (1990).

47. *Supra* note 46 at 153: "An Effective Legislative Framework". A recent study which looks at the practical and theoretical implications of sustainable development in a major river basin in Canada has been carried out by the Westwater Research Centre at the University of British Columbia; see Dorsey, (ed), *Perspectives on Sustainable Development in Water Management: Towards Agreement in the Fraser River Basin*, Westwater Research Centre, University of British Columbia (1990), and Dorsey (ed) and Griggs (co-ed), *Water in Sustainable Development: Exploring Our Common Future in the Fraser Basin*, Westwater Research Centre, University of British Columbia (1991); for a preliminary analysis of law reforms needed to achieve sustainability in British Columbia, see Sandborn (ed), *Law Reform for Sustainable Development in British Columbia Sustainable Development Committee*, Canadian Bar Association, British Columbia Branch (1990).

imperatives. The Brundtland Report itself talks about changing the content of growth, in order to make it less material and energy intensive and more equitable in its impact.⁴⁸ Pearce *et al* make a clear distinction between economic growth and sustainable economic growth; they distinguish these in turn from sustainable development.⁴⁹ They maintain that economic development encompasses broader values such as the quality of (presumably human) life, whilst economic growth is related more narrowly to increases in a defined quantity, real Gross National Product per capita.

They argue that an economy experiencing economic growth over long periods of time cannot be said to be on a path of sustainable growth if there is evidence that the feedback from changes in environmental quality will induce non-sustainability. They state that sustainable development (as opposed to sustainable growth) involves at least all the things that impact on individuals' wellbeing, and, more loosely, factors such as freedom and self-respect. It also involves the question of intergenerational equity, which in turn involves the transmission from one generation to the next of a "constant natural capital". This latter concept is stated to mean "providing a bequest to the next generation of an amount and quality of wealth which is at least equal to that inherited by the current generation".⁵⁰

With respect to non-renewable resources, it is difficult to see how a "constant" amount of capital can be transmitted from one generation to the next. Once exploited, those resources are gone forever, at least in their original form. Pearce and his colleagues answer such an argument by saying that "it is the aggregate quantity that matters, and there is considerable scope for substituting [human-made] wealth for the natural environmental assets".⁵¹

Another view on economic growth has been put in the Australian edition of *Our Common Future*, which attempts to distinguish between growth and development:

Development is sometimes equated with growth. Although they are used interchangeably in *Our Common Future*, they are not the same. Economic growth is defined as an increase in real income per capita. Development on the other hand, simply means desirable change. Whether growth constitutes development depends on social goals. An increase in real income per capita may be one in a list of development objectives.⁵²

48. WCED *supra* note 4.

49. Pearce *et al. supra* note 22 at 33.

50. Pearce *et al. supra* note 22 at 48.

51. *Supra* note 22 at 58.

52. WCED *supra* note 4 at 26-27; the passage goes on to note however, that sustainable development and sustainable growth, though not the same, are related, in the sense that in a market economy, development, however defined, requires that the level of real income per capita is maintained, if not increased.

The complexity of the relationship between economics and ecology has also been addressed:

Based upon our best understanding of how economics and ecosystems operate, we must try to generate rules of behaviour which, if followed, would sustain each. We can think of economic and ecological sustainability precepts as overlapping circles. Where they overlap is found the terrain of sustainable development and the starting point of a national strategy.

Economic sustainability can be defined as the way that humans must manage an economy to preserve its productivity.⁵³

The economic growth paradigm, intrinsic to most western economic theory, has come under some question in the past couple of decades.⁵⁴ A re-examination of economic growth, in particular changing the *quality* of growth is likely to be a continuing feature of the sustainability debate of the 90's. It is certainly clear that the last decade has seen a conflict between those who would characterise themselves as economic rationalists and those who take a broader view of the direction of societal goals. This seems to be the case both in lower income as well as in higher income countries, although in the case of the more impoverished nations, there is an understandable drive for economic development at the expense of broader environmental considerations. Perhaps in the 1990's, the predominance of economic rationality will be overtaken by ecological rationality.⁵⁵

(C) Sustainable Development and Environmental Ethics

(i) Moral Considerability

The ethical matters raised by the concept of sustainability in the modern environmental debate include the question of the proper place of humans in the world's environment, and what factors should be taken into account in determining the value to be placed on human life as opposed to other forms of life. The issue of the inherent value of non-human environments can be seen as an essential aspect of this debate.

At one end of the moral spectrum, the only thing that matters is the effect of development or conservation decisions on human beings. On the other end there is the view that every aspect of the environment,

53. *Op cit.*, 28.

54. See Daly, *Towards a Steady-State Economy*, Freeman, 1973; Schumacher, *Small is Beautiful*, Abacus 1977; Pearce *et al supra* note 22.

55. See further, Dryzek, *Rational Ecology: Environment and Political Ecology* at 55-56; in Australia at least, the naming of the Federal Government's initial Discussion Paper, *Ecologically Sustainable Development*, indicates that this is already happening, at least on the level of rhetoric.

down to rocks and microbes, should be taken into account as far as these effects are concerned. The first view would be characterised as including only humans in the category of items that can be "morally considerable". On the other view, all items of the ecosystem can be regarded as being within the moral framework. This debate is not new. Roderick Nash, in his book the *Rights of Nature*,⁵⁶ traces the development of the "moral consideration" argument back many centuries in Western and Eastern religion and philosophy. He uses the development of civil rights in the United States over the past couple of hundred years as an example of the extension of moral consideration to slaves and women, and argues that a recognition of the moral consideration from humans to the whole of the natural realm can be seen as a progression of the civil liberties debate. Others who would go further, to include the whole earth as being morally considerable. The idea of the earth as a living being, popularised by Lovelock and his Gaia hypothesis,⁵⁷ would seem to imply that an adequate environmental ethic demands that moral value should be assigned to the whole earth. Other thinkers would not limit moral considerability to this planet, but would view the universe itself as the "originating matrix" of the earth; the universe should thus be included in the ultimate ethical circle. By not limiting moral philosophy to the boundaries of the earth, accusations of "geocentrism" or "Earth chauvinism" ("terraism"?) would thus be avoided.⁵⁸

The social construction of environment as something outside human beings underlies much of Western society, of which a primary characteristic is often seen as the imperative of economic development. This mode of thinking tends to "squeeze out" the soft, supposedly unquantifiable values⁵⁹ espoused by those who take a *conservative* view of the exploitation of resources:

By definition, humankind cannot live in "the environment". The very word separates "us" from "it". But the global reality belies the myth. The truth is that human beings are now the dominant species in all the world's ecosystems and the most powerful ecological force on earth. From this perspective, we do not have environmental problems, the biosphere has a people problem. There can be no solution to our present dilemma unless we are prepared to accept this reality.⁶⁰

56. Primavera Press/The Wilderness Society, 1990.

57. Lovelock, *Gaia: A New Look at Life on Earth*, New York 1979.

58. See Nash, *supra* note 56 at 157-158; further, Hargrove, (ed) *Beyond Spaceship Earth: Environmental Ethics and the Solar System*, San Francisco 1986.

59. See Tribe, "Ways not to Think About Plastic Trees: New Foundations for Environmental Law", (1974) 83 (7) *Yale Law Journal*, 1312.

60. Rees, "The global context for sustainable development", paper to symposium *Planning for Sustainable Development*, School of Community and Regional Planning, University of British Columbia, 1988 (emphasis in original, unpublished on file, Faculty of Law, University of Sydney).

The values exposed here can be characterised as the tension between an anthropocentric, or human-centred, view, and an eccentric, or nature-centred view. The anthropocentric view was introduced by thinkers such as Descartes, who saw the world as a mechanism or machine which can be broken down into its constituent parts, analysed, and thoroughly understood. This mechanistic vision was further developed by scientists such as Newton, and has been shown to be the dominant paradigm influencing much of the industrialised world for the past 200 years.⁶¹ To a certain extent, anthropocentricity is an inevitable result of the limitations of human perception, but a definition which expresses more clearly the responsibility of human beings to respect the intrinsic value and inherent right to continue to exist of the rest of the natural environment may well be more broadly acceptable.

Christopher Stone⁶² was a significant contributor to the debate on inherent value. He argued that the inherent value perspective meant that the non-human aspects of the environment, once being regarded as morally considerable, can also be the subject of legal rights which can be translated into a demand for their continuation in existence. Just as other entities, such as corporations, could be represented in court, so can elements of the non-human natural environment bring legal actions, through human representatives, to protect their interests. The implication of this perspective is that the term "sustainability" ought not to be confined to the preservation of human life as such, but to the entire natural realm. In addition, the notions of the alleged inviolability of the use of private property, prevalent in many countries, and, at the international level, the principle of sovereignty, must be seriously questioned in the context of the introduction of strategies for sustainability.⁶³

(ii) *A World Ethic of Sustainability*

These arguments seem logically to lead to the development of a world

61. See generally, Rifkin with Howard Entropy: *Into the Greenhouse World*, Bantam (1989) at 36, and De La Court, *Beyond Brundland: Green Development in the 1990's* New Horizons Press 1990 at 132; for further analysis of the anthropocentric eco-centric dichotomy, see Tribe, *supra* note 59; O'Riordan and Turner *An Annotated Reader in Environmental Planning and Management*, Pergamon (1983), Ch 1; Boer *supra* note 28.

62. Stone, *Should Trees have Standing? Towards Legal Rights for Natural Objects*, William Kaufman 1984; *Earth and Other Ethics*, Harper and Row (1987).

63. See Sax, "The Law of a Livable Planet", paper to the LAWASIA International Conference on Environmental Law, Sydney, (1989); Ryan, "Freedom of Property An Urban Planning Perspective", (1988) 11(1) *Urb. of New South Wales L.J.* 48; Boer, "Some Legal and Ethical Issues", in Boer and James, (eds), *Property Rights and Environment Protection*, Environment Institute of Australia 1990. On the question of sovereignty see Piddington, *supra* note 13, where he advocates the use of expert facilitators provided by the United Nations to solve transboundary problem, see also Muldoon, "The International Law of Ecocodevelopment: Emerging Norms for Development Assistance Agencies", (1986) 22(1) *Texas International Law Journal* at 51, and Handl, *supra* note 13 at 31-32.

ethic of sustainability, called for in the Brundtland Report,⁶⁴ and *Caring for the Earth* which sets out "World Ethic for Living Sustainably", summarised as follows:

Every human being is part of the community of life, made up of all living creatures.

Every human being has fundamental and equal rights, including the right to access to the resources needed for a decent standard of living.

Each person and each society is entitled to respect of these rights and is responsible for the protection of these rights for all others. Every life form warrants respect independently of its worth to people.

Everyone should take responsibility for his or her impacts on nature.

Everyone should aim to share fairly the benefits and costs of resource use.

The protection of human rights and the rights of nature is a world-wide responsibility that transcends all cultural, ideological and geographical boundaries.⁶⁵

There is little doubt that many attitudinal changes will be needed in order for such a set of ethical principles to be broadly introduced and accepted.

(iii) *The Precautionary Principle and Sustainability*

The precautionary principle seems quickly to be entrenching itself as a concept in international law, and is beginning to appear in some major international documents.⁶⁶ The precautionary principle was stated

64. "...human survival and well-being could depend on success in elevating sustainable development to a global ethic." WCED *supra* note 4 at 352; see also Engel and Engel (ed) *Ethics of Environment and Development*, Balhaven Press London 1990 *passim*.

65. IUCN 1991 *supra* note 5 at 14.
66. The principle has been adopted by the United Nations Environment Programme and various international conferences on prevention of pollution of the seas, eg: the Nordic Council's International Conference on Pollution of the Seas, 1989; see generally Cameron and Abouchar, "The precautionary principle: a fundamental principle of Law and policy for the protection of the global environment", *Boston College International and Comparative Law Review*, Vol XIV, 1, (1991); this article examines in some detail the extent to which the precautionary principle has been adopted both in international documents and declarations as well as in domestic law; see also Gundling, "The status in International Law of the principle of precautionary action" *International Journal of Estuarine and Coastal Law*, Vol 5, 1, 2 and 3, at 26 (1990); Third International Conference on the Protection of the North Sea, see Cameron and Werksman, "The precautionary principle: a policy for action in the face of uncertainty (draft) International Convention on Climate Change, Background Papers on International Environmental Law, Centre for International Environmental Law, London); see also Handl *supra* note 13 at 20-21.

in the Bergen Declaration as follows:

Environmental measures must anticipate, prevent, and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.⁶⁷

The implication of this duty is that developers must assume from the fact of development activity that harm to the environment may occur, and that they should take the necessary action to prevent that harm; the onus of proof is thus placed on developers to show that their actions are environmentally benign.⁶⁸

The precautionary principle can be characterised as a broadly applicable principle of ethical responsibility between human beings towards the environment and to each other as part of that environment.

Cameron and Abouchar state that the function of the principle is to ensure that:

...a substance or activity posing a threat to the environment is prevented from adversely affecting the environment, even if there is no conclusive scientific proof linking that particular substance or activity to environmental damage.⁶⁹

The words "substance" and "activity" imply substances and activities introduced as a result of human intervention. They allow the principle to be used in relation to all aspects of environmental degradation, and to extend it to the area of sustainability. The Bergen Declaration referred to this link quite explicitly, stating that in order to achieve sustainable development, policies must be based on the precautionary principle.⁷⁰ In *Caring for the Earth*, the precautionary principles again urged for adoption in decisions on development and environment. The principle

67. *Bergen Ministerial Declaration on Sustainable Development in the ECE Region*, May 1990, Article 7, as cited in Cameron and Abouchar, *supra* note 66 at 18; this formulation appears in a slightly modified form in a draft Convention for the Conservation and Wise Use of Forests, prepared by the Centre for International Environmental Law, London (1991); it means "the principle of establishing a duty to take such measures that anticipate, prevent and attack the causes of environmental degradation where there is sufficient evidence to identify a threat of serious or reversible harm to the environment even if there is not yet scientific proof that the environment is being harmed".

68. The Australian Conservation Foundation *et al*, *supra* note 32 at viii, stated that placing the burden of proof on proposers of technological and industrial development to demonstrate that they are ecologically sustainable should be one of the guiding principles of ecologically sustainable development; see also Cameron and Abouchar *supra* note 66 at 22.

69. See Cameron and Abouchar, *supra* note 66 at 2.

70. See Cameron and Abouchar *supra* note 66 at 18.

is invoked in relation to the basic elements of adequate national legal systems particularly when standards for pollution prevention are being set.⁷¹

Although it is possibly too early to assert that the precautionary principle has become a norm of international law,⁷² the time when it will be accepted may not be far off. Already it has been incorporated in the draft of a convention on forestry,⁷³ and there is little doubt that it will appear regularly in different guises in a broad range of international documents and statements. It will no doubt surface as a prominent principle in the UNCED process. It also seems clear that more countries will absorb the concept in domestic legislation,⁷⁴ particularly as a result of its acceptance in international legal discourse.

III. SUSTAINABILITY IN LOWER INCOME COUNTRIES

(A) Transfer of concepts

It cannot be assumed that precise policy prescriptions for sustainable development are automatically transferable from one country to another. Given the vast inequalities in per capita income between countries, the concept must for this reason acquire different shades of meaning, according to different economic, environmental, cultural and political circumstances. The question of intragenerational equity must be addressed as well as specific economic and political problems both within countries as well as between countries. The draft of *Caring for the Earth* entitled, *Caring for the World's* stated:

Greed and the maldistribution of power among people are major causes of environmental degradation and human suffering. They are the chief obstacles to achieving sustainability.⁷⁵

Importantly, it also recognised that inequality between people within countries relates to both economic and political dimensions. It asserted:

Unsustainable behaviour by poor people is almost always due to factors such as loss of land, growing indebtedness, or loss of access to markets, that leave them unable to support themselves

71. *Supra* note 4 at 29-30, 66 and 68.

72. See Gündling, *supra* note 66 at 30; Cameron and Abouchar are more positive; they assert that the fact that 34 countries endorsed the principle at the Bergen Conference, is an indication that the principle is emerging as a rule of customary international law; see *supra* note 66 at 20-21 and further evidence there cited.

73. Draft Convention on the Wise Use of Forests, Centre for International Environmental Law, London; see *supra* note 67.

74. See Cameron and Abouchar *supra* note 66 at 6-12 for a discussion of the extent that the principle has been adopted in domestic legislation.

75. IUCN, UNEP and WWF 1990.

76. *Supra* note 75 at 16.

properly. When wealthier people can appropriate resources for themselves or their clients at costs far below their value for production, they treat the resources as free goods, using them up and moving on. Poor people who lose by such appropriations are powerless to hold the wealthy accountable. Having no recourse, they place greater stress on their environments, by moving deeper into the forest, occupying marginal land unsuitable for agriculture or herding, or adopting some other destructive way of staying alive.⁷⁷

The Brundtland Report also recognised the inequities between countries, and that many problems arise from inequalities and access to resources. Inequitable land ownership structures, it asserted, can lead to over-exploitation of resources in the smallest holdings, with harmful effects on both environment and development:

As a system approaches ecological limits, inequalities sharpen. Thus when a watershed deteriorates, poor farmers suffer more because they cannot afford the same anti-erosion measures as richer farmers. When urban air quality deteriorates, the poor, in their more vulnerable areas, suffer more health damage than the rich, who usually live in more pristine neighbourhoods. When mineral resources become depleted, late-comers to the industrialisation process lose the benefits of low-cost supplies. Globally, wealthier nations are better placed financially and technologically to cope with the effects of possible climatic change.

Hence, our inability to promote the common interest in sustainable development is often a product of the relative neglect of economic and social justice within and amongst nations.⁷⁸

On its own terms, the Brundtland report thus implied that the future cannot be "common" in the sense of being equal, fair and just, when the economic and ecological situation of lower and higher income countries are compared.⁷⁹ The Report maintained that the reduction of poverty is a precondition for environmentally sound development in lower income countries. Economic growth was thus seen as an essential part

77. *Loc cit*; these two passages do not appear in the final report, *Caring for the Earth*; this does not make them less relevant.

78. WCED *supra* note 4 at 93.

79. See WCED *supra* note 4 at 72 *et seq*; further, Roseland, M., "Social Equity and Sustainable Development: Uncommon Future", background paper for *Planning Sustainable Development*, School of Community and Regional Planning, University of British Columbia 1988 (unpublished); on file Faculty of Law, University of Sydney; see also North South: a Program for Survival, Report of the Independent Commission on International Development Issues, 1980, cited in Muldoon *supra* note 63 at 20.

of strategies for sustainable development.⁸⁰ It was said that this meant that a rise in per capita income in those countries was necessary. The Report indicated that before an impact could be made on absolute poverty a growth rate of 5% per annum in the lower income economies of Asia, 5.5% in Latin America and 6% in Africa and West Asia was required.⁸¹

The recommendation of continued economic growth was well received by both the Third World as well as the rich nations of the First World, because it did not call for any radical change in economic direction.⁸² In essence, critics argue, the Report means business as usual, with a few economic and other adjustments.⁸³

Barbier puts a somewhat different view of poverty and economic growth:

The concept of sustainable economic development as applied to the Third World... is therefore directly concerned with increasing the material standard of living of the poor at the "grassroots" level, which can be quantitatively measured in terms of increased food, real income, educational services, healthcare, sanitation and water supply, emergency stocks of food and cash, etc., and only indirectly concerned with economic growth at the aggregate, commonly national, level. In general terms, the primary objective is reducing the absolute poverty of the world's poor through providing lasting and secure livelihoods that minimise resource depletion, environmental degradation, cultural disruption and social instability.⁸⁴

This conceptualisation of a possible solution is close to that prescribed by *Caring for the Earth*, which argued that in lower income countries, faster economic growth is needed to secure satisfactory living standards and to finance investment in both human development and environmental conservation.⁸⁵

(B) Women and sustainable development

Caring for the Earth acknowledges that women are important managers of natural resources, but that in most countries they have limited access to and control over income, credit, land, education, training, health care, information or time, and that they suffer the worst of poverty and

80. WCED *supra* note 4 at 92-93, and see Eckersey, *supra* note 24 at 47.

81. WCED *supra* note 4 at 94.

82. Eckersey, *supra* note 22.

83. See for example, Trainer, T, 'A rejection of the Brundtland Report', University of New South Wales, 1988 (unpublished; on file, Faculty of Law University of Sydney).

84. Barbier, "The Concept of Sustainable Economic Development", *Environmental Conservation*, 14(2), 1987, 103.

85. IUCN 1991 *supra* note 5 at 21.

environmental degradation. Whilst this is most particularly true in lower income countries, women in higher income countries suffer from the same power imbalances, relating to environmental decision making as well as other aspects of their lives, although they are affected in different ways from women who live more closely to the earth.

Any strategy for the implementation for sustainable development must include positive discrimination law and policies to ensure that women have an equal say in environmental decision making and that they have access to the political power to make the necessary changes. These changes extend to changing attitudes on family size and women's "traditional" roles, extending mandatory primary education to female children, particularly in rural areas, providing opportunities for women to become economically self-sufficient and providing health and nutrition programmes targeted at mothers.⁸⁶ Supporting women in this way can generate other benefits, including better economic performance, improved family welfare, greater alleviation of poverty and slower growth of population. The recent report by the Commonwealth Secretariat⁸⁷ maintains that one of the fundamental constraints faced by women is the inferior status accorded to them by law and custom in many countries, owing no more than one per cent of the world's land, and with many have no legal identity separate from men enabling them to act on their own behalf.⁸⁸ This report recommends that governments, agencies and communities seek to develop mechanisms to facilitate the full participation of local women in all levels of policy-making and decision-taking. It also endorses the request of the UNCED secretariat for all countries to complete an audit on the role of women in sustainable development, in order to clarify the policies and actions needed at the national and international levels to strengthen women's roles in fostering sustainable development.⁸⁹

Another view is provided by De La Court, who maintains that the issue is not extending development aid to women as an essential 'target group' but that development itself was the problem. "Insufficient and inadequate 'participation' in 'development' was not the cause for women's increasing underdevelopment: it was, rather, their enforced but asymmetric participation in it, by which they bore the costs but were excluded from the benefits, that was responsible for their marginalisation."⁹⁰

86. IUCN 1991 *supra* note 5 at 23.

87. See *Sustainable Development: An Imperative for Environmental Protection*, Report by a Group of Experts on Environmental Concerns and the Commonwealth, published by the Economic Affairs Division, Commonwealth Secretariat, London (1991).

88. *Supra* note 87 at 107-121.

89. *Supra* note 87 at 120-121.

90. De La Court, *supra*, note 61 at 134-135 quoting Vandana Shiva, "Let us survive: women, ecology and development", Research Foundation for Science and Ecology, Dehradun, *Sainigiansh*, No. 3 (1989).

(c) Indigenous people and sustainable development

Caring for the Earth further recognises that indigenous people around the world have also been discriminated against, their lands seldom being acknowledged as being theirs, suffering colonisation, expropriation and resource exploitation.

Some 200 million indigenous people (4% of the world's population) live in environments ranging from polar ice to tropical deserts and rain forests. The lands where they still live are usually marginal for sustainable high-energy agriculture or industrial resource production, but they are distinct cultural communities with land and other rights based on historical use and occupancy. Their cultures, economies and identities are inextricably tied to their traditional lands and resources.⁹¹

In many instances, indigenous people who now form minority groups living in higher income countries have similar problems to those living as minorities in lower income countries. Internal colonisation affects them in much the same way as external colonial oppression has done and continues to do in other countries. The most common manifestation of this oppression is not having their lands and laws recognised by the dominant powers. The recognition of the customary law of indigenous peoples by national legislation is urged by the World Conservation Union in its response to the Brundtland Report:

In many countries which have gained independence during the past few decades, an understandable urge for modernisation has led to sweeping social changes, which have been reflected in legislation. Frequently, these have involved transplanting foreign models in what appears now to have been a rather doctinate fashion. Among the casualties of this process have frequently been counted long-established customary laws which in many cases embodied traditional wisdom about the sustainable management of land, particularly pastures and forests; examples include legislation which vests the ownership of all trees in the state or some public body, with the result, that no incentive remains for private individuals to replant.⁹²

The question of cultural sustainability is not one which is squarely addressed in documents relating to sustainable development. The march

91. IUCN 1991 *supra* note 5 at 61.

92. IUCN, The World Conservation Union, *From Strategy to Action: The IUCN Responses to the Report of the World Commission on Environment and Development* (1989) at 94; see also at 29-31; a paradigm example of this is the attempted nationalisation of the forests in Nepal in the late 1950's, see Pearce et al *supra* note 17 at 180.

of progress, in terms of more efficient food and fuel wood production, the introduction of new technologies, the raising of per capita income to a certain minimum level, can bitterly pass by the efforts of a community to keep itself going in a cultural sense.⁹³ The introduction of sustainable strategies, especially through outside-imposed regulation and bureaucratic domination may serve to destroy the feeling of community between people. Community-based strategies, which may generate legislation and consistent administrative structures in many countries, seems overall to be a more effective form of implementation. In the 1990's there is some recognition in a number of countries that traditional land care can be of great value in introducing sustainable management practices.⁹⁴

IV. TRANSNATIONAL ENVIRONMENTAL LAW AND SUSTAINABILITY

(A) The growth of transnational environmental law

In the past two decades there has been a spectacular growth in the transnational law relating to the environment, both in terms of customary law as well as in the form of conventions and treaties.⁹⁵ The United Nations Conference on the Human Environment held in Stockholm in 1972 adopted a wide range of resolutions which formed an Action Plan for international cooperation on environmental matters. The Conference also produced the Stockholm Declaration, containing 26 principles relating to the future preservation and enhancement of the human environment.⁹⁶ These principles are frequently cited as the starting point of international environmental law.⁹⁷

93. The connections between cultural sustainability, self-determination and the right to own, use and control their traditionally occupied land is clearly recognised in the draft Universal Declaration on the Rights of Indigenous Peoples; see Report of the United Nations Economic and Social Council Report of the Working Group on Indigenous Populations, Ninth Session, October 1991; see also, Martyn, "Cultural Sustainability and Overseas Development Assistance in the Third World: Is there a role for Social Impact Assessment in AIDAB Projects?", Legal Research Project, School of Law, Macquarie University, 1990 (unpublished; on file, Faculty of Law, University of Sydney).

94. In Australia the introduction of schemes of "joint management" of national parks in areas where Aboriginal people live is one example of this; in Nepal, the transfer of management of state forests back to local villages is another; see Ghimour, King and Fisher, "Management of forests for local use in the hills of Nepal: Changing forest management paradigms", Nepal-Australia Forestry Project Discussion Paper (1987), cited in Pearce et al *supra* note 17 at 188.

95. The distinction can be put in terms of "soft" law and "hard" law. Soft law can be defined in this context as rules agreed between states which have no "enforceable" component; it expresses norms of a legal character. Hard law is that international law, generally found in conventions and treaties, which normally entails legal rights and duties; see eg Muldoon *supra* note 63 at 8; Koester *supra* note 6 at 17; see also Handl *supra* note 13 at 7 and Schachter, "The Emergence of International Environmental Law" 44 *Journal of International Affairs* at 457.

96. *Supra* note 1; see also Muldoon, *supra* note 63 at 14-16; Koester *supra* note 6 at 2.

97. See eg Schacter *supra* note 95 at 459.

Koester⁹⁸ states that before the Stockholm Declaration, international environmental law could hardly be considered an independent branch of international law, but that since that time, some 300 multilateral agreements and some 900 bilateral agreements have been concluded in the environmental area. Also, a substantial body of international literature on environmental law has been developed. He states that in view of this it is not surprising that the Stockholm Declaration is described as crucial to the development of international environmental law.

It is also clear that international law has become an increasingly important mechanism in the quest for sustainable development. Muldoon for example points to the formulation of duties, norms and rules directed towards states and other development actors, and that international environmental law concepts have been integrated with concepts of the law of development to create new concepts and duties to supersede earlier ones. The law of "ecodevelopment" has resulted from this integration.⁹⁹ Koester maintains that with the development of the World Charter for Nature¹⁰⁰ and the legal principles generated by the Legal Experts Group on Environmental Law of the World Commission on Environment and Development,¹⁰¹ there are now general principles of environmental law which have the validity of international customary law. Such a proposition is probably a little optimistic; some of these might be regarded as tentative at best. In any case, the more significant of these include:

- a general obligation to protect the environment and natural resources;
- that the right to a healthy and well-functioning environment can be considered as a human right;
- an obligation to prevent domestic activities from harming the environment in other countries to any significant degree;
- obligations of States to use resources in such a way as to allow other States to use them in the same way;
- an obligation to inform other countries of projects which might affect the environment in those countries;
- an obligation to cooperate with other States to solve at least trans-boundary environmental problems and corresponding problems in

98. *Supra* note 95 at 15.

99. Muldoon, *supra* note 63 at 7; see also Richardson, "A study of the response of trans-national law and policy to the environmental problems of East Asia and the South Pacific" (1990) 7 *Environmental and Planning Law Journal* at 210-215.

100. *Supra* note 3; see also Kiss and Sheldon *supra* note at 46-48.

101. See Experts Group on Environmental Law of the World Commission on Environment and Development, *Environmental Protection and Sustainable Development: Legal Principles and Recommendations*, Graham and Trotman/Martinus Nijhoff, (1986); see also WCED *supra* note 4, Annex one at 392.

extra-territorial areas, and to warn other States in the event of an environmental disaster.¹⁰²

As noted above, there are now quite a number of multilateral and bilateral conventions and agreements relating to the protection of the environment. However, the 1980's has seen a demand for at least three new conventions. They are the proposed biodiversity convention, a framework convention on the law of the atmosphere¹⁰³ and a convention on sustainable development and environment protection, planned to be ready for the Earth Summit in Brazil in 1992.

(B) "Green conditionality" and sustainable development

Strategies on the part of international donors to introduce ecologically sustainable development by placing what are sometimes referred to as "green conditions" on aid are one way of achieving better environmental and economic conditions in many countries. Some aid agencies, including the World Bank, the Asian Development Bank and the United Nations Development Programme have seen the need to consider the environmental consequences of their development work.¹⁰⁴ The Australian International Development Assistance Bureau (AIDAB), has specifically addressed the question of "green conditions". It has developed a policy of supporting ecologically sustainable development, which is intended to encompass all delivery mechanisms in aided countries.¹⁰⁵ The AIDAB strategy emphasises the fact that the Australian Government will pursue a policy of supporting actively projects and programs of multi-lateral banks that promote ecologically sustainable development. It states that when projects which are inconsistent with that policy are submitted for approval, Australian representatives will be directed to state Australian opposition to them and to vote against them. In addition, AIDAB contributions to the United Nations and other multi-lateral organisations will be directed to specific activities consistent with the policy.¹⁰⁶ Whilst this policy is generally laudable, there may well be some countries which will find it a little patronising.

102. Koester *supra* note 6.

103. See e.g. Horn, "The Greenhouse Effect and International Law", (1990) 7 *Environmental and Planning Law Journal* at 294.

104. A detailed analysis of integrating environmental management into development policies can be found in Muldoon, *supra* note 63 at 30-38; for a critical review of the policies of some of the agencies, see Richardson, *supra* note 99 at 213-215.

105. *Ecologically Sustainable Development in International Development Co-operation*, An AIDAB discussion paper Nov. 1990; this paper followed from the Australian Government's discussion paper *Ecologically Sustainable Development*, *supra* note 32.

106. *Supra* note 105 at 27; AIDAB's policy extends to ensuring the environmental soundness of imported goods, activity proposals for the World Food Program, and giving preference to sponsored students who wish to study disciplines relevant to the implementation of ecologically sustainable development strategies. AIDAB also intends

V. IMPLEMENTING SUSTAINABILITY THE NATIONAL LEVEL

(A) The role of legal and administrative mechanisms

The implementation of sustainability at national level has taken a variety of paths. Many of these paths will eventually lead to the framing of appropriate legislation and administrative policies which are intended to encourage, if not enforce, sustainability strategies. The World Conservation Strategy of 1980,¹⁰⁷ an important document at the time, which changed attitudes around the world, can now be characterised as one beginning in a very long process of change. The weakest section of that Strategy was the detail of implementation. Nevertheless, a great number of countries have now initiated National Conservation Strategies on the basis of the World Conservation Strategy.

The need for integrated, comprehensive environmental laws at a national level has been identified by UNEP and other agencies since the 1970's.¹⁰⁸ New environmental laws now represent the fastest growing body of legislation in virtually every nation; in their basic elements they are often similar in content. However, as with concepts of sustainability, aspects of environmental laws appropriate to one cultural context may be inappropriate to that of another. Differences in income, attitudes to punishment, and vastly different ways of conceiving the place of humans in the environment are bound to throw up alternative ways of dealing with similar problems.¹⁰⁹ For example, the imposition of large fines in low income countries for pollution offences simply would not work, but locally imposed community service orders may well be a better solution in some instances. Lawyers and policy analysts, particularly those who come from outside the country concerned, who are employed to draft legislation and administrative guidelines must be careful

to conduct an annual environmental audit to assess projects and their conformity to the policy of ecologically sustainable development. The other side of "green conditioning" is the issue of "lead", aid, which relates the provision of aid to trade and procurement requirements of the donor country; such requirements may well inhibit sustainability strategies that a country may have in train; see Fernandez, "Development Assistance and Sustainable Development", (1986, unpublished, cited in Muldoon, *supra* note 63).

107. *Supra* note 2.

108. See *The Implementation of the Montevideo Programme for the development and Periodic review of Environmental law 1981-1991: An overview supra* note 7 at 36.

109. Robinson, "A Legal Perspective on Sustainable Development", in Saunders (ed), *The Legal Challenge of Sustainable Development*, Canadian Institute of Resources Law, Calgary (1990) at 17.

110. For example, the Islamic view of environmental matters reflect a rather more integrated view of humans and the universe in comparison to the Western view; see Kader, Sabbagh, Glend and Izidien, *Basic Paper on the Islamic Principles for the Conservation of the Natural Environment*, IUCN, with Meteorology and Environmental Protection Administration, Kingdom of Saudi Arabia, 1983; see also Kiss and Sheldon, *International Environmental Law*, Graham and Trotman 1991 at 21-13.

to ensure that any preconceived notions they may have of how to proceed fits in with the people and communities they are endeavouring to assist.

It is significant to note that the Brundtland Report devoted a whole chapter to legal and administrative strategies for sustainable development.¹¹⁴ It is becoming more broadly recognised that without a legal basis for implementation, a governmental policy of sustainable development across all industrial sectors will not be effective in many cases. *Caring for the Earth* stated:

Environmental law, in its broadest sense, is an essential tool for achieving sustainability. It requires standards of social behaviour and gives a measure of permanency to policies. Environmental law, based in turn on scientific understanding and a clear analysis of social goals, should set out rules for human conduct which, if followed, should lead to communities living within the carrying capacity of the Earth.¹¹⁵

B. National Conservation Strategies

Many countries have now carried out reviews of their government policies in the light of the Brundtland Report,¹¹³ and various aid agencies in the Pacific region, the South Pacific Regional Environment Programme (SPREP) has been instrumental in organising regional initiatives for the introduction of National Environmental Management Strategies in five countries.¹¹⁴ These Strategies, which are in essence the same as National Conservation Strategies, involve the development and revision of national and provincial environmental legislation and administrative mechanisms.¹¹⁵

Nepal is used here as an illustration of some of the factors involved in the implementation of a National Conservation Strategy.

C. Implementing sustainable development in Nepal

Nepal is ecologically and socially a very diverse country, which faces a broad range of environmental difficulties. These include a diminishing resource base coupled with a population explosion which has created

111. WCED, *supra* note 4, Ch 12.

112. IUCN 1991 *supra* note 5 at 67.

113. For example, in the Asian region Indonesia, South Korea, Malaysia, Nepal, Pakistan, the Philippines and Sri Lanka have done such reviews. Four of these countries, Malaysia, Nepal, Pakistan and Sri Lanka, have adopted, or are in the process of adopting National Conservation Strategies with the assistance of the World Conservation Union "Brundtland follow-up in Asia", (1990) 21 (4) *IUCN Bulletin*, 9.

114. Cook Islands, Federated States of Micronesia, Solomon Islands, Tonga and the Republic of the Marshall Islands.

115. The legal reviews of the five countries will be published by SPREP in 1992.

increasing rural poverty, leading to increased deforestation, soil erosion, degradation of watersheds and contamination of ground water, soil and air. Increasing urbanisation through a process of migration of rural population has been aggravating environmental and planning problems in the towns.¹¹⁶

The National Conservation Strategy for Nepal was developed over some years by the Government of Nepal in collaboration with the local project office of the World Conservation Union (IUCN). The Strategy was published in 1988, and covers a very broad range of environmental matters.¹¹⁷ The objectives of the Strategy are to help :

1. satisfy the basic material, spiritual and cultural needs of the people of Nepal of both present and future generations;
2. ensure the sustainable use of Nepal's land and renewable resources;
3. preserve the biological diversity of Nepal in order to maintain and improve the variety of yields and the quality of crops and livestock, and to maintain the variety of wild species, both plant and animal;
4. Maintain essential ecological and life-support systems, such as soil regeneration, nutrient recycling and the protection and cleansing of water and air.

The process of implementation of the Strategy is now underway. This involves a broad range of initiatives, including field work, extensive training courses for local experts, research into pollution sources, heritage surveys, the development of an environmental impact assessment programme and the review of environmental law and administrative mechanisms.

Partly as a result of the completion of the National Conservation Strategy, and partly because of the direct pressures of environmental degradation, there has been a growing awareness of the need to modernise existing laws, administrative processes and institutional arrangements relating to environmental matters. Another factor has been the democratisation of the Nepalese political system in the past two years, which has resulted in the redrafting of the Nepal Constitution. A number of groups and individuals pressed for the introduction of an environment protection provision. The new Constitution approved in the latter part of 1990 includes the following provision in relation to the environment:

116. The causes and effects of environmental degradation in Nepal have been the subject of many studies. See e.g. Ives and Messeri, *The Himalayan Dilemma: Reconciling Development and Conservation*, Routledge, London, 1989; see also a review essay which questions some of the conclusions reached in the book: Fisher, "The Himalayan Dilemma: Finding the Human Face", 1990 31(1) *Pacific Viewpoint*, 69-76.

117. *Building on Success: The National Conservation Strategy for Nepal*, His Majesty's Government of Nepal, and International Union for Conservation of Nature and Natural Resources 1988.

The State shall give priority attention to the protection of the environment and the reduction of impacts on the environment due to the implementation of physical development activities through public awareness on environmental quality, and shall give special attention to the protection of rare animal species, the forests and the vegetation of the country.¹¹⁸

This provision could not be regarded as the strongest possible. As it is contained in the Directive Principles rather than the body of the Constitution, it is legally unenforceable. However, it does represent a significant advance in terms of the public debate over the environment in Nepal, and may properly form the basis of wide-ranging administrative and legislative reforms over the next few years.

The Environmental Law and Institutional Development Programme carried out as part of the implementation of the Nepal National Conservation Strategy looked at the existing legislative and administrative arrangements relating to environmental protection, land use and resource management in Nepal.¹¹⁹ The Review found that while there is a good deal of administrative infrastructure and legislation in Nepal relating to the environment which could be used in the implementation process, little of it could be regarded as being effective. Much of the legislation relates to land use, in particular forestry, mining and other resource exploitation. As in most other countries, the existing law has not been drafted with any particular philosophy of environmental conservation in mind. There is little effective pollution control legislation, no environmental impact assessment legislation, minimal planning legislation and no effective scheme for cultural heritage protection. The natural heritage is protected only insofar as it is covered by national parks legislation. The Review indicated that much of the existing environmental, resource management and land use planning regime needs a good deal of attention in order to bring it up to modern international standards. The Review suggested that a comprehensive environmental protection statute should be introduced and that existing environmental legislation should be substantially upgraded. New planning legislation for both urban and rural areas was also suggested.

The second stage of the World Conservation Union study concentrates on writing drafting instructions for a new environmental management regime, to be embodied in a statute, with the possible establishment

118. In translation, from Hassan, "Legal Aspects of Conserving Biodiversity in South Asia", paper to Workshop on Designing and Implementing the Biodiversity Conservation Strategy, IUCN General Assembly, Perth, December 1990.

119. *Review of Existing Legislation, Administrative Procedures and Institutional Arrangements relating to Land Use, Environment Protection and Resource Development*, His Majesty's Government of Nepal and the World Conservation Union (IUCN) Nepal 1991; the Review and its recommendations are presently being considered by the Government of Nepal.

of a comprehensive environment protection agency. The model being developed could set up cooperative, flexible arrangements for planning throughout the country, guaranteeing participation from local groups and individuals, whilst also setting nationally consistent standards for environmental impact assessment and pollution control.

D. Institution building

Bureaucracies relating to resource management, build up over a period of years, are often loath to incorporate new functions such as mandatory environmental assessment, or the addition of Environment Units. Nevertheless, it is clear that the setting up of new institutions and the reorientation of existing bodies are an integral part of the process of change occurring in many countries. In lower income countries in particular, there seems also to be an acceptance that existing structures may take a long time to change, for reasons of lack of resources, lack of political will and the pressure for resource development, particularly from external investors. In commenting on the rewriting of constitutions in the South Asian region to import environment protection provisions, it has been stated :

In the ultimate analysis, however, whether a state follows and implements conservation measures would depend on political will. The development of such political will has followed a familiar pattern in the region. First, each country in the region faces or reaches intense environmental degradation. From such degradation emerges consciousness among the people to meet environmental challenges with long-term societal objectives. This awareness next sensitises the Government and the decision makers and results at this stage in the announcement of an Environmental Code or legislation and a plethora of conservation-oriented measures. These measures, however, are first not implemented because the institutions and the necessary infrastructure have not developed to keep pace with the policy and legal regime. The next stage in the development of the political will is the allocation of resources for institution-building, human power development, technical data and laboratories. Institutions develop from the embryonic department on the National Planning Ministry that routinely handles environment and conservation measures to the ultimate blossoming of a fully-fledged Ministry of the Environment duly reinforced by a full-time Environmental Protection Agency in the country.¹²⁰

The point at which an individual country is ready to establish a Ministry for the Environment and/or an Environment Protection Agency

120. Haasan, P, *supra* note 116 at 9.

(assuming that these are litmus tests for the highest level of institutional response in this area) is difficult to determine. The timing depends on the stage of economic development, the degree of expertise within government departments, the pressure from electorates and the effect of the latter on politicians.

Even in Australia, where environmental bureaucracies have been in existence in most States and at federal level since the 1970's and where there is generally a high level of environmental awareness, there is only in recent times a push to introduce a federal Environment Protection Agency.¹²¹

E. Drafting appropriate legislation

Each country and in federal systems, each jurisdiction within a country, is likely to have somewhat different requirements and emphases in relation to the importation of sustainable development principles into its legislation and administrative practices. No one model will be sufficient.

Nevertheless, *Caring for the Earth*¹²² states that governments should ensure that their nations are provided with comprehensive systems of environmental law, covering as a minimum :

- * land use and development control
- * sustainable use of renewable resources, and non-wasteful use of non-renewable resources
- * prevention of pollution through imposition of emission, environmental quality, process and product standards designed to safeguard human health and ecosystems
- * efficient use of energy, through the establishment of energy efficiency standards for processes, buildings, vehicles and other energy consuming products
- * control of hazardous substances, including measures to prevent accidents during transportation
- * waste disposal, including standards for minimisation of waste and measures to promote recycling
- * conservation of species and ecosystems, through land-use management, specific measures to safeguard vulnerable species and the establishment of a comprehensive framework of protected areas.

121. See *Proposed Commonwealth Environment Protection Agency: Position Paper for Public Comment*, July 1991; in New South Wales, which has what is considered to one of the more advanced environmental statutes in Australia, (the *Environmental Planning and Assessment Act 1979*) legislation to establish an Environment Protection Authority was only passed in 1991; see *Protection of the Environment Administration Act 1991*.

122. IUCN 1991 *supra* note 5 at 68.

One recent example of an attempt to import sustainable development concepts into legislation is the *Resource Management Act*, which was passed in the New Zealand Parliament in 1991. The legislation covers a very broad area, including environment protection, planning, heritage, resource allocation and Maori rights. It specifically sets out the purpose of the legislation as promoting the sustainable management of natural and physical resources and defines sustainable management as :

managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while

- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- (b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment (s 5(1)).

While the Act was somewhat watered down from the original Bill,¹²³ the Act nevertheless has the potential to be a significant precedent for other countries. It will be interesting to monitor its implementation, and whether its high ideals will be able to be achieved in practice. Fisher's comment on the then draft legislation was :

The enactment of the Bill will fundamentally change the direction of decision making in resource management in New Zealand. Sustainable management is the pivot around which all decision making and policy formulation revolves. All other provisions are in a sense incidental to this concept. The mineral industries in particular will face major challenges in implementing the new system. This industry, like every other element within the community, will be able to influence policy formation in a way that has not been possible under the existing legislation. The whole scope of policy formulation and decision making will change.¹²⁴

123. See Resource Management Bill 1990: see also background documents: *Implementing the Sustainability Objective in Resource Management Law*, Working Paper No 25, Resource Management Law Reform, Ministry for the Environment, New Zealand 1988; Cronin, *Ecological Principles for Resource Management*, Ministry for the Environment, New Zealand 1988.

124. Fisher, "The sustainable management of resources in New Zealand", paper to Australian Law Teachers Association Conference, Canberra 1990 (unpublished).

VI. CONCLUSION

The introduction of sustainable strategies on a worldwide basis will take a great deal of effort and time. At an international level, the drafting of international conventions and declarations, will provide the necessary stimulus and legal obligation to begin the slow process of implementation of sustainability. The signatories to the mooted environmental conventions will not all respond equally or uniformly to the obligations which will be contained in such documents, and many will require considerable assistance from the international community to comply.

The integration of economic and ecological aspirations is one of the greatest challenges facing international institutions and national governments around the world today. The reorientation of national economies, changing the ethos of transnational and national corporations and establishing the culture of sustainability throughout the community of nations as well as domestically will not be easy to achieve. The Earth Summit of 1992 will be a major step towards these objectives. In many countries it will be the role of the environmental lawyer to supply the mechanisms for their attainment.

LEGAL PROTECTION OF COMPUTER SOFTWARE: ISSUES AND CONTROVERSIES

PROFESSOR P.S. SANGAL* AND DR. SUDHIR K. DIXIT**

IT IS said that the first digital computer, as opposed to advanced calculating machine, was invented about five decades ago in 1939 by the American Physicist Atanasoff. The vanguarding of the related software industry did not occur however, until much more recent times, with the introduction of the ultrasophisticated electronics of the last two decades.¹ Computers and computing form the basis of information technology. Developments in this field have raised questions as to the adequacy of the legal protection not only of the products of the technology, such as software, but also for the protection of information or data which is converted for use in computers and is accessed, manipulated and transmitted in this medium. This raises fundamental questions about subsistence, authorship and ownership, and what constitutes infringement of the programs.²

In this paper, we intend to look at these problems and how the law has responded to the challenges posed by the high speed of development in the field of computer software.

I COMPUTER

Computer is an electronic machine capable of storing and processing data. Computers serve as memories for all kinds of data and as data-processors. In the computer language, the machines are called 'hardware' and the explanations, instructions and systems which have been developed in order to run the machine are called 'Computer Software'.³

II COMPUTER SOFTWARE

There is no universally agreed definition of a software. It is generally understood to mean computer programs and other materials prepared in connection with the use of computers. The WIPO Model Provisions on the Protection of Computer Software,⁴ however, offer the definition which

* B.Sc., LL.M., Ph. D., Head & Dean, Faculty of Law, University of Delhi, Delhi 110 007.

** B.A., LL.M., Ph.D., Research Associate, Faculty of Law, University of Delhi, Delhi 110 007.

1. See Mr. Justice Paul de Jersey, "Protection of Computer Programs : The Current Position", 22 *Intellectual Property in Asia and the Pacific*, p. 25 (1988).

2. See generally T. Black, *Intellectual Property in Industry*, p. 192 (1989).

3. See *Background Reading Material on Intellectual Property*, p. 363 (WIPO Publication No. 659 (E), 1989).

4. *WIPO Model Provisions on the Protection of Computer Software*, 1978. See also 'Pro-

could be considered useful for our purpose. It defines a computer program as "a set of instructions capable, when incorporated in a machine-readable medium, of causing a machine having information processing capabilities to indicate, perform or achieve a particular function, task or result."

III DESIRABILITY OF ADEQUATE LEGAL PROTECTION

There is great incentive for countries to ensure legal protection for such technology. Computer software is particularly vulnerable, and that necessitates specially designed protection. The cost of developing programs constitutes a large part of total production costs in the software industry. But software packages, once produced, may often be copied at nominal expense, and wide-spread illicit copying and distribution will erode the original author's own market.⁵

The computer technology in relation to intellectual property laws gives rise to some questions. For last two decades these questions have been the subject of debate at national and international level as well. Except the computer software, a general consensus on these questions were recorded in the Report of the Second Committee of Governmental Experts on Copyright Problems arising from the use of computers for access to or the creation of works. This Committee was convened by World Intellectual Property Organisation (WIPO) and UNESCO in Paris in June 1982. The Committee with one or two modifications, substantially endorsed a set of draft recommendations. The salient conclusions may be summarized as follows:⁶

(i) The input of a protected work into a computer system includes the reproduction of the work on a machine-readable material support, and also the fixation of work in the memory of computer system and both these acts (i.e. reproduction and fixation) are governed by the International Conventions.⁷

(ii) The output of the protected work from a computer system should be protected under copyright law, irrespective of the form of the output.

(iii) In amending or modifying national legislation to take account of computer use of protected works, care should be taken to ensure that author's moral rights should continue to be exercisable in relation to computer use and that the exemption and limitations on the copyright owner's right of control which computer technology

tection of Computer Software", memorandum prepared by the International Bureau of WIPO for Seminar on *Intellectual Property and High Technology*, held in New Delhi from March 24, 1987.

5. See Millard, *Legal Protection of Computer Programs and Data*, p. 4 (1985).

6. See *Background... op.cit.*, p. 364-365.

7. See article 9(1) of the Berne Convention for the Protection of Literary and Artistic Works, 1886 administered by WIPO and Article 4 bis (1) of the Universal Copyright Convention, 1952 as revised in 1971, administered by UNESCO.

might render desirable, do not exceed the limits on such exemptions permitted by the conventions.

(iv) Non-voluntary licences in relation to the computer use of protected works should only be adopted when voluntary licensing is impracticable, and should, in any case, be in accordance with Convention principles; and

(v) Where a non-voluntary licence is adopted by a national law, its effect should be confined to the territory of that law.

In many countries the existing law appears to be implementing these general conclusions.

IV VARIOUS WAYS OF LEGAL PROTECTION

Apart from the Copyright Protection, three types of legal protection of computer program may be considered. Firstly the protection by patent, secondly by Trademarks and thirdly by the law relating to trade secrets and confidentiality.

(i) Protection by Patent

With regard to the patent protection, the question arises whether a computer program can constitute an invention, because so called 'instructions to the human mind' are not generally considered to be inventions. Yet patents could be granted where software forms an integral part of a process, provided that the usual conditions of patentability (novelty, inventive step, and industrial application) are fulfilled.

Generally, the patent protection is not attractive even in relation to those few programs which satisfy the requirements of novelty and inventiveness.⁸ It is because the obtaining of patent protection can be a very slow process, so that most programs could become obsolete before receiving protection. There is always possibility of succeeding in the challenge to a patent. Further disadvantage in the patent protection is that patent litigation is expensive and the patent specifications are published.

(ii) Protection by Trademarks

The law of trademark has also been viewed as one of the means of legal protection of computer programs. It is said that, normally, registration of a mark for the protection of computer software takes place under one or two categories, which covers electrical and scientific equipment or paper goods and printed matter.

As there is no specific use class provided for computer software, pro-

8. See Report of the International Bureau of WIPO and Advisory Group of Governmental on the Protection of Computer Software : "Model Provisions on the Protection Exports of Computer Software", p. 2, January 1978.

tection could be found by the use of these two classes of trademark protection. A trademark could be used on scientific equipment, paper articles e.g. the wrappings in which the discs are inserted or on promotional or advertising literature. This means that applications for both classes of protection are always necessary in whatever jurisdiction it is decided to sell or manufacture. It is important to remember that service marks are now available to protect the services which computer software manufacturers provide in addition to the hardware and software itself.⁹

(iii) Protection by Trade Secrets

Protection for the "Trade Secrets" contained within computer software may be available. If information about such matters is imparted to employees then a court may in an appropriate case restrain a breach of the confidentiality. Contractual provisions in contracts of employment may strengthen any such obligation of confidence.¹⁰

In this connection, it may be pointed out that as far as the protection against violation of trade secrets are concerned, the question arises how far such protection is available under the national laws. In respect of India, it is not possible to protect computer software by the law relating to the trade secrets because we do not have law relating to the trade secrets. Moreover, it is clear that this form of protection is limited to programs which are communicated with an obligation of confidentiality. Finally, it is worth mentioning that the user of the computer program may be bound to use the program only for specific purposes and not to communicate it to third party.

(iv) Protection by Copyright

With regard to the protection of computer software by copyright, the question arises that whether computer programs are protectable 'works' in the sense of copyright laws. In this connection it may be said that though the computer programs do not readily fall into the categories of writings, books or scientific works, yet most of the national laws have overcome any doubts by expressly stipulating that computer programs are to be considered as works protected by copyright.

V PROTECTION OF COMPUTER SOFTWARE IN INDIA

In India, Copyright Act, 1957 was amended in 1984 to expressly extend protection to computer program. This has been done by redefining the 'Literary Work' under section 2(0) of the Copyright Act, 1957. Now the term 'literary work' includes tables, compilations and computer programs, that is to say, program recorded on any disc, tape, perforated media or

9. See T. Black, *op. cit.*, p. 217.

10. See Mr. Justice Paul de Jersey, *loc. cit.*, p. 27.

other information storage device, which, if fed into or located in a computer or computer based equipment is capable of reproducing any information.¹¹ As in India, the international trend is strongly towards the use of copy right law as the favoured mode of protection, and adapting its traditional form as necessary to cover programs. Now we will discuss the protection of computer software in some other countries.

VI PROTECTION OF COMPUTER SOFTWARE IN SOME OTHER COUNTRIES

In the United States of America, the Copyright Act, as amended in 1980, defines a 'computer program' as a set of statements or instructions to be used directly or indirectly in a machine in order to bring about a certain result.¹² Copyright protection extends to the literary or textual expression contained in the computer program. Copyright protection is not available for ideas, program logic, algorithms, systems, methods, concepts, or layouts.¹³ In U.K. Copyright, Designs and Patents Act, 1988 extends protection to the computer program. It includes the computer program under the definition of 'literary work'. It provides that 'literary work' means any work, other than a dramatic or musical work, which is written, spoken or sung, and accordingly includes a table or compilation, and a computer program.¹⁴

The United Kingdom Parliament has also enacted the Copyright (Computer Software) Amendment Act, 1985. The Act confirms that copyright protection is available for computer programs under the Copyright Act. The issue of Copyright in computer programs had not been authoritatively determined in the United Kingdom prior to the amending legislation. Such judicial analysis as had occurred, mainly in the course of interlocutory proceedings, suggested a trend towards the existence of copy right in such technology.¹⁵

In the Federal Republic of Germany, the Computer programs are protected by an Act dealing with Copyright and Related Rights amended in 1985. Computer programs are protected for a period of 25 years from the date of publication.¹⁶

In Australia, the traditional copyright model having been found in appropriate to confer protection on advanced computer software, the Australian legislature responded promptly. The Copyright Amendment Act came into force on June 15, 1984. Its object is to ensure protection for

- 11. Section 2(0) of the (Indian) Copyright Act, 1957.
- 12. Section 101 of the U.S. Copyright Act, 1976.
- 13. See generally, R.H. Stern, "The Legal Protection of Computer Software and Computer-Related Innovations in the United States," *Industrial Property* April-May, 1982.
- 14. Section 3(1) of the U.K. Copyright, Designs and Patents Act, 1988.
- 15. Mr. Justice Paul de Jersey, *loc cit*.
- 16. See Conferences and Meetings Text in 4 *World Intellectual Property Report*, p. 25 (1990).

computer programs, including those expressed in object code. Computer programs are now included within the definition of 'literary work'. It requires "an expression, in any language, code or notation of a set of instructions (whether with or without related information) intended, either directly or after either or both (a) conversion to another language, code or notation; (b) reproduction in a different material form, to cause a device having digital information processing capabilities to perform a particular function."¹⁷

Japan has also amended its Copyright Law in 1986 to add the definition of the term 'program' to the other definitions. The amendments expressly identify a "program" to mean "an expression of combined instructions given to a computer so as to make it function and obtain a certain result."¹⁸

It is not widely known that Philippines was one of the first few countries to provide legal protection to the computer software. In Philippines, "computer programs" are expressly protected by the Intellectual Property Decree, 1972. Intellectual Property Decree protects the work produced through new technologies and techniques. "Computer Programs" are expressly protected, under the Intellectual Property Decree, in recognition of the considerable amount of costs as well as technical knowledge and expertise that go into their preparation. The Intellectual Property Decree, 1972 does not provide a definition of 'Computer Programs' or 'Computer Software'.¹⁹

The first copyright law in the history of Peoples' Republic of China was enacted on September 7, 1990 and came into force on June 1, 1991. Chinese Copyright Law extends protection to the computer programs.²⁰ The Chinese Copyright law does little to define the scope of protection for computer software. According to Chinese officials, most questions on software protection will be addressed in implementing regulations. Official have indicated that the software will be protected for a period of 25 years.²¹

VII INTERNATIONAL PROTECTION OF COMPUTER SOFTWARE

In view of the problems existing with the protection of computer programs at the national level, the question of international protection of computer program has also arisen. International protection means the protection of programs in a country in respect of which the owner of the

- 17. Section 10 (1) of the Australian Copyright Act, 1968. See Mr. Justice Paul de Jersey *loc. cit.* see also, A Liberman, "The Legal Protection of Computer Programs in Australia," *Industrial Property*, (Nov. 1983).
- 18. Section 10 of the Japanese Copyright Act, 1970 as amended in June 1985.
- 19. Section 2(a) of the Philippines Intellectual Property Decree, 1972. See also Carlo A. Carag, Rodriguez & Somera, "Philippines : Protecting Computer Software" *IP ASIA*, p. 2 (Jan. 4, 1990).
- 20. Article 3(8) of the Chinese Copyright Law, 1990.
- 21. See Joseph Simone, "Analysis of PRC's First Copyright Law", 4 *World Intellectual Property Report*, p. 282 (1990).

program is not a citizen or resident. In this connection, it is generally believed that the existing international conventions i.e. Berne Convention For the Protection of Literary and Artistic Works, 1886 as amended on July 14, 1967 and the Universal Copyright Convention, 1952 as revised in 1971, may provide the required protection to the computer programs.

Here it may be pointed out that membership of these Conventions provides protection abroad to the creative work of the citizens of the member countries to the same extent, as a member state protects the works of its own citizens. Therefore, it is desirable that the laws of different countries giving protection to the computer programs should be consistent among themselves to minimise the problems where works are used outside the author's home country.

CONCLUSION

The problem of protection of computer software basically arises due to the modern technology which has made the reproduction or copying of computer programs possible at a fraction of the cost of actually producing the original program. Detection of its use is difficult largely because of its technical nature. It can be made possible but it requires considerable determination to chase as infringer successfully.

Keeping in view the preceding discussion, it may be said that the Copyright Law seems to be the most favoured medium adopted internationally to protect the computer software. But there remains need for making the copyright law more efficient to cope with this fast changing technology. Copyright law is required to be so tailored as to make it perfect to deal with the problem of copying and other infringements more quickly. At the same time, the owners of the computer software should also examine alternative ways for protecting their software.

INTELLECTUAL PROPERTY IN INTERNATIONAL TRADE AND THE URUGUAY ROUND

AUTAR KRISHAN KOUL*

INTELLECTUAL PROPERTY rights are sets of rights usually divided into two branches, namely "industrial property" and "copyright" and include rights relating to: (a) Literary, artistic and scientific works; (b) Performances of artists, phonograms and broadcasts, designated as neighbouring rights; (c) Inventions in all fields of human endeavour; (d) Scientific discoveries; (e) Industrial designs; (f) Trade marks, service marks and commercial names and designations and (g) Protection against unfair competition and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.¹ Intellectual property rights have a direct bearing and symbiosis with invention and technology. Technology has been defined as a systematic knowledge for the manufacture of a product or of rendering of a service in industry, agriculture or commerce whether that knowledge be reflected in an invention, a utility model, an industrial design, a plant variety, or in technical information in the form of documentation or in skills or experiences of experts for the design, installation, operation or maintenance of an industrial plant or its equipment or for the management of an industrial or commercial enterprise or its activities.²

Today's world is a world of science and technology, rather science and technology is the key to the progress of mankind. The role of science and technology in the economic growth, prosperity and development of any country needs hardly any explanation and the intellectual capital formed by scientific resources and the aptitude for the technological innovations as expressed in proprietary knowledge constitutes the major assets of any country.

The international cooperation in recognising, protecting and enforcing intellectual property rights dates back to 1883—the International Convention for the Protection of Industrial Property commonly known as the Paris Convention;³ the Berne Convention for the Protection of Literary

* Professor of Law, University of Delhi.

1. Article 2 (viii) of the Convention Establishing the World Intellectual Property Organisation (WIPO) concluded in Stockholm, July 14, 1967. See WIPO, *Background Reading Materials on Intellectual Property* 3 (1988).

2. *Ibid* at 2.

3. For the text of the Convention, see G.H.C. Bodenhausen, *Guide to the Application of the Paris Convention*, WIPO (1968). The Paris Convention has been revised from time to time after its signature in 1883, the last revision being Stockholm revision of 1967. See also, A.K. Koul, in P.S. Sangal and Kishore Singh (eds.), *Indian Patent System and Paris Convention: Legal Perspectives* 50 (1987).

and Artistic Works 1886 as revised at Paris, 1971 and there are number of conventions and treaties dealing with specific categories of intellectual property.⁴ These include, for Patents—the Patent Cooperation. Treaty 1970—a multilateral treaty to simplify and make more economical the work connected with the obtaining of protection and the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the purpose of Patent Procedures 1980—a special agreement under the Paris Convention for protection of micro-organisms; for Trade marks—the Madrid Agreement for the Repression of False or Deceptive Indications of Sources on Goods 1891, the Madrid Agreement concerning the International Registration of Marks 1891, the Trade Marks Registration Treaty adopted by the Vienna Diplomatic Conference 1973, the Lisbon Agreement for the Protection of Appellations of Origin 1966, the Nairobi Treaty on the Protection of the Olympic Symbols 1981, the Nice Agreement concerning the International Classification of Goods and Services for the purpose of Registration of Marks 1957, and the Vienna Agreement Establishing an International Classification of Figurative Elements of Marks 1973⁵—all these conventions protect and facilitate cooperation in the industrial property and trading of goods across the international frontiers; for Designs—the Paris Convention for the Protection of Industrial Property as industrial designs receive the same general protection under the Paris Convention as patents and trade marks, the Hague Agreement concerning the Deposit of Industrial Designs that falls within the framework of Paris Convention, the Locarno Agreement establishing an International Classification for Industrial Designs 1971; for Copyright—Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations 1961, the Convention for the Protection of Producers of Phonograms against Unauthorised Duplication of their Phonograms 1971, and the Convention relating to the Distribution of Programme—Carrying Signals Transmitted by Satellites 1974.⁶

In the last two decades intellectual property rights have entered into a new and complex phase wherein computers, semiconductors⁷, integrated circuits, reprography including photocopying, audio and video-recording, broadcasting innovations such as satellites and cable distribution and biotechnology have started becoming the objects of intellectual property rights. Amid such myriad multilateral recognition and protection of intellectual property rights, intellectual property rights in relation to trade or trade related intellectual property rights (TRIPS) is a phenomena newly discovered and rather has taken the centre stage of the latest and most

4. For the text of these Conventions, see WIPO and UNESCO, Copyright Laws and Treaties of the World (1987).

5. For the text of these Conventions, see *ibid.*

6. For the text of these Conventions, see *ibid.*

7. Semi-conductors have already been subjected to intellectual rights protection in United States : Semi-conductor Chip Protection Act, 1985 (SCPA), Pub. L. No. 98-620, 98 Stat. 3347 (Suppl.) IV (1987).

modern and complex international trade negotiations commonly referred to as Uruguay Round of Multilateral Trade Negotiations (URMTN).⁸

The URMTN included negotiations on both trade in goods and trade in services and separate negotiating groups were established for each. The Goods Negotiating Group was further divided into fourteen negotiating sub-groups such as Tariffs; Non-Tariff Measures; Natural Resource Based Products; Textiles and Clothing; Agriculture, Tropical Products, GATT Articles; Safeguards; MTN Agreements and Arrangements; Subsidies and Countervailing Measures; Dispute Settlement; Trade-Related Aspects of Intellectual Property Rights including Trade in Counterfeit Goods; Trade Related Investment Measures; and functioning of the GATT system.⁹

TRIPS is providing to be the most contentious agenda of URMTN in the acrimony of the North-South dialogue and in the backdrop of the already existing multilateral legal framework in this field as well as in the light of on-going debate for the revision of the Paris Convention within the framework of the New international economic order (NIEO) deliberations.¹⁰

As the negotiations on TRIPS have opened serious questions of interpretation and jurisdiction of GATT as well as conceptual understanding of the problem of TRIPS, the scope of this paper is restricted to (a) explaining the relationship of intellectual property rights with international trade; (b) whether GATT constitution warrants a connection between intellectual property and GATT articles; (c) what exactly have been the responses of the less-developing countries including India to such a debate? and (d) what are the opportunities and risks of intellectual property and GATT connection?

The TRIPS problem requires a relatively inclusive solution and is not suited to the code making process used to conclude the GATT Tokyo Round.

Trade Related Aspects of Intellectual Property Rights

Science, technology and its innovation after the second world war, has revolutionised the world beyond recognition and the industrial, material and trade growth of the industrial countries especially of the OECD coun-

8. Uruguay Round of Multilateral Trade Negotiations (URMTN) is the seventh multilateral trade negotiation officially launched in September, 1986 at the special session of GATT Contracting Parties at Punta-del-Este, Uruguay which were to be concluded by the end of 1990. For Ministerial Declaration on the Uruguay Round, see 21 *JWTL* 583 (1987); In true GATT fashion, the URMTN was hailed as a great victory by all... to head off, or at least postpone, a complete breakdown in international trade relations... and has even been described as a 'kiss of life' for GATT, J. Murray Gibbs, "The Uruguay Round and the International Trading System", 21 *JWTL* 5 (1987).

9. For details, see Ministerial Declaration, *supra* note 8 at 585-589.

10. For a brief account of the revision of Paris Convention, see, AK. Koul, *supra* note 3.

tries can largely be ascribed to science, technology and research and development (R&D). Science and technology in the form of computers, aerospace products, chemicals, pharmaceuticals, video recorders, telecommunications equipment, weapons, software, fax machines and special effects laden movies have assumed a pivotal role and has equally dramatically contributed to the international trade of the world gross domestic product.¹¹ The two major scientific marvels of the twentieth century transportation and communication have led to the intensification of international economic interdependence as a consequence of which the world has been reduced to a global village.¹² The emergence of radar, radio field communication, and rockets have acted both as economic and military weapons in shaping the international relations amongst the countries.

The wealth created by and in the form of science and technology is largely protected by intellectual property rights regime—copyright, patents and trade marks and are essentially intangible in character, whose marginal costs of production and reproduction are often near Zero once these rights are created.

The *raison d'être*, of protecting intellectual property rights is the natural law theory that persons exerting and creating the right owns the right and any appropriation of his ideas, exertions, and investments must not be stolen as he has the exclusive right and the society must respect his exclusivity in the use of his intellectual rights.¹³ The intellectual property rights have been recognised in most of the countries of the world in differing and varied shape depending upon the balancing of the immediate public welfare against the long term investments in private capital formulations and its cost-benefit advantages, rather it is the primary of public welfare which has shaped the grant of intellectual property rights in the majority of the countries respecting the intellectual property rights. Some of the legal products would grant patents to the general categories as well as specific products taking into account socio-economic, developmental, technological and public interest needs.¹⁴

The developed countries in general and the industrialised countries of the OECD region in particular have monopolised science and technology to the extent that it is not only a major component of their wealth but is

11. World merchandise trade in 1988 reached an estimated \$ 2.84 trillion, reflecting a 14 per cent increase over 1987 and substantially exceeding the increase in world gross economic product. 1988 World Trade Growth Up Sharply, Strong 1989, Possible, GATT Report Says 6 International Trade Rep. (BNA) 272 (March 1 1989).
12. Macdowell, Laswell and Reisman, "Theories about International Law; Prologue to a Configurative Jurisprudence", 8 *Va J Int L*, 188-194 (1968).
13. A.K. Koul, *supra note* 3.
14. See generally, The International Patent System: The Revision of the Paris Convention for the Protection of Industrial Property, UNCTAD TID B/C.6/AC.3/2; The Role of Patents in the Transfer of Technology to Developing Countries. Report of the Secretary General of United Nations UN DOC. E/3861, Rev. 1 March 1964.

also a major traded international commodity. As the less-developing countries are net importers of science and technology, the international market is imperfect in which the less-developing countries are unequal partners and technologically dependent on the industrialised countries.¹⁵

Industrialised countries especially United States of America¹⁶ as well as its business interests¹⁷ were keen to bring intellectual property rights on the agenda of the URMTN for the reasons that trade and intellectual property rights are a part of a common set of policies that must be integrated in the GATT in the interest of maintaining industrialised countries competitiveness.¹⁸ Many producers in Europe and America complained that their patents, trade marks and other intellectual property rights are not only infringed but extensively pirated in foreign markets, especially in the LDCs¹⁹ and these producers stressed the need to eliminate the distortion to international trade said to result from these practices.²⁰

The negotiating objectives of the United States are amply demonstrated in the various provisions of its Omnibus Trade and Competitiveness Act of 1988 more specifically in Section 301 of the Act. While section 303

15. It is observed that out of some million odd patents registered all over the world, only some 20,000 that is about 0.7 per cent are owned by enterprisers or persons in less-developing countries — S.J. Patel, *The Technological Dependence and the Less-Developing Countries*, 12 *J. of Mod. Af. Studies* 12 (1974). The technological dependence of the less-developing countries is the single most important reason for their poverty. It is estimated that only 2 per cent of the world research and development is carried out in less-developing countries, A.K. Koul, UNCTAD Code on Transfer of Technology, 20 *Foreign Trade Review* 141-162 (1985).
16. The United States Omnibus Trade and Competitiveness Act of 1988 has inscribed the protection of intellectual property rights as one of the principal priorities of United States Trade Policy. The mandate to negotiate improved protection in other countries is supported by the statutory authority of Section 301. Pub. L. No. 100-418, 102 Stat. 1107 (1988).
17. See, for instance, Intellectual Property Committee (IPC), Keidanren, UNICE Basic Framework of GATT Provisions on Intellectual Property: Statement of Views of the European, Japanese and United States Business Committee (1988), hereinafter as Basic Framework. For the role of other business organisations, see Turnbull, Intellectual Property and GATT: TRIPs at the Mid-term, *I.I. Proprietary Rights* 9, 11 (1989).
18. The US International Trade Commission estimates of worldwide loss to 193 firms "due to inadequate intellectual property protection in 1986 at \$ 43 to \$ 61 billion." A proliferation of regional arrangements in the field of intellectual property rights thus appears not to have slowed the unprecedented growth of unauthorised and unregulated use on an international scale of the very intellectual property rights that are increasingly recognised at the regional level. See, Basic Framework, *supra note* 17 at 13.
19. See, Basic Framework, *supra note* 17 at 8. Companies in industrialised countries often imply that all such disputes over intellectual property are a straight forward matter of piracy or theft. Counterfeit Rolex watches and Gucci handbags do fall into that category; see also World Trade Survey, *The Economist*, 6-40 (September 22, 1990).
20. See generally, J. Murray Gibbs, "The URMTN and International Trading System", 21 *JWTL* 5 (1987).

of the Act outlines procedures for identification of countries that deny adequate protection of, or market access for, intellectual property rights; section 301 of the Trade Act of 1974 as amended by the 1988 Trade Act, provides that if United States rights or benefits under a trade agreement are violated or an action, policy or practice of a foreign country is forced to unjustifiably burden or restrict United States commerce, the United States Trade Representative (USSTR) may (a) suspend, withdraw or prevent, the application of, benefit of trade agreement concessions... (b) impose duties or other import restrictions on the goods... and fees or restrictions on the services of, such foreign country... or (c) enter into binding agreements with such foreign country... (to) (i) eliminate... the (unfair) act, policy or practice... (or) (ii) provide the United States with compensatory trade benefits. The 1988 Trade Act's amendments to section 302 of the Trade Act of 1974 provide special expedited procedures for investigations under section 301 that involve countries identified as denying adequate and effective protection of, or market access for, intellectual property.

The economists²¹ of the industrialised countries argue, of course, without sound empirical data²² that increased levels of intellectual protection will produce much desired and long-term benefits for LDCs. They suggest that increased levels of developing country patent protection will: (a) encourage technology transfers and investment from the industrialised economies to the LDCs economies by providing a hospitable climate; (b) stimulate local innovation and technology infrastructure by providing an environment in which local innovators are encouraged to create and share their creations; (c) encourage domestic investment in local-technology-based industry; and (d) promote exports by opening markets otherwise closed to those manufacturing without authorisation. In the trade mark area, they suggest that LDCs protection will increase the local introduction of new foreign discoveries and the diffusion of information necessary to make consumer markets function efficiently by permitting consumers to make educated choices about goods of varying costs and quality. In the copyright area, they suggest that enhanced intellectual property protection stimulates local innovation and flow of ideas from abroad. The industrialised countries economists realise that there is a short term loss from enhanced protection that will be absorbed by LDCs in the form of lost pirate revenues and the reallocation of resources, but those losses will be compensated by the long term benefits enumerated above.²³

21. R.M. Gadbaw and T. Richards, *Intellectual Property Rights: Global Consensus or Global Conflict*, R.M. Gadbaw and T. Richards ed., 20-21 (1988).
22. So far not a single empirical study has been made of the alleged benefits of intellectual property rights to developed and LDCs, although Burnstein believes that benefits accrue to the LDCs; Burnstein, *Diffusion of Knowledge-Based Products: Application to Developing Economies* 22 *Econ. Inquiry* 612, 615-18 (1984).
23. Klaus Planner, *The Usefulness of National and International Protection of Inventions*, WIPO, *The Use of Patent System by Industrialised Enterprises in Developing Countries*; 43, 51-54 (1982).

Studies suggest that the prospects for the industrialised countries to retain a major share in the global market in the 21st century depend not only on their ability to stimulate technological innovation but also on efforts to ensure an orderly diffusion of that technology through appropriate international legal machinery.²⁴ In the integrated world market, the ability of the industrialised countries to maintain healthy trade balance, in the face of cheap and non-traditional exports from the LDCs threatening the industrial countries monopoly export sectors, depend in large measure on exports of intellectual goods, in the production of which the industrialised countries retain significant comparative advantages.²⁵

An international market for "counterfeit and pirated goods" has emerged from the lackadaisical attitude of the LDCs towards the intellectual property system to protect the proprietary rights of creators, inventors and trade-mark owners²⁶ and deficiencies in this system, real or perceived has not only reduced the share of the industrialised countries in the total quantum of intellectual goods traded across the countries, but has also established a parallel market in competition with the legitimate market for products distributed in conformity with national and international intellectual property laws.²⁷ LDCs have become the principle beneficiaries of this parallel market to an extent that it exacts a form of private foreign aid from investors in OECD countries who defray the underlying costs of science, technology and its innovations.²⁸

While pressing for the inclusion of TRIPS on the GATT agenda, the United States argues, *inter alia* that intellectual property rights regime including the Paris Convention are no longer instruments sufficiently responsive to modern protective needs of intellectual property owners, and consequently to the interests of the national economy of states party to these conventions. Old conventions do not include sufficient enforcement provisions and lack effective dispute settlement mechanisms, neither do these conventions oblige member states to effectively comply with their obligations and implement the related treaty provisions.²⁹ The United States proposal refers to the earlier GATT of negotiating an international anticounterfeiting code and seeks to broaden the GATT competence to

24. Gadbaw, *Intellectual Property and International Trade: Merger or Marriage of Convenience*, 22 *Van. J. Transnational L.* 223-232 (1989). 27 per cent of United States export contained an intellectual property component. *Id.* at p. 232.
25. See generally, R. Hudec, *Developing Countries in the GATT Legal System* (1987); see also, UNCTAD, *Multilateral Trade Negotiations: Evaluation and Recommendations Arising Therefrom*, 12-13, U.N. DOCTID/227 (1979). Recommendations arising from 17 at 15.
26. See Basic Framework, *supra* note 17 at 15.
27. See Platt, *Measures to Combat International Piracy*, 11 *European Int'l. Prop. Rev.* 239 (1989); Levin, *What is the Meaning of Counterfeiting?* 18 *Int'l. Rev. Indus. Prop. and Copyright* 1, 435 (1987).
28. See, *supra* note 21 at 2-3.
29. U.S. Proposal for Negotiations on Trade Related Aspects of Intellectual Property Rights, 34 *Pat. Trade Mark and Copyright J.* (BNA) 667 (1987).

include "trade related aspects of intellectual property rights". The United States suggested the conclusion of a new international treaty. The GATT Arrangement on Intellectual Property which should establish high standards for the protection and enforcement of intellectual property rights of all kinds—including patents for bio-technology processes and products, patents for micro-organisms, copyrights for computer programmes, and the protection of trade secrets and integrated layout designs. The parties to such GATT arrangement should undertake to adapt their national laws and enforcement mechanisms accordingly and they are to agree on a dispute settlement mechanism that will provide for member states the possibility of resorting to retaliation, including withdrawal of other GATT concessions or obligations, against a state that fails to carry out effectively its obligations under the GATT arrangement.³⁰

The United States has sought to demonstrate its resolve to protect intellectual property rights unilaterally also. The Omnibus Trade and Competitiveness Act of 1988 gives ample latitude to the United States administration to impose its own standards on other countries in protecting intellectual property rights and makes the intellectual property rights as principal priorities of United States trade policy.³¹ Using the special powers conferred by super and special 301 of the Omnibus Trade Act, the United States Administration named the countries that are particularly in their protection of intellectual property rights or that have imposed barriers to market access and sought expeditious improvements in the protection of intellectual property rights and the prevention of piracy in those countries.³² It appears that the goal of the United States is essentially to harmonize international intellectual property law with United States laws and practice and to introduce reciprocity into the international protection of intellectual property.³³

The other industrialised countries have not logged far behind to United

30. Another reason for the United States interest in this area was, of course, the connection of intellectual property rights with the trade in services which United States wants to bring under the Umbrella of GATT. See Burg, Trade in Services: Towards a Development Round of GATT Negotiations Benefiting Both—Developing and Industrialised States, 28 Harv. Int'l L. J. 1 (1987).
31. Section 301 of the Omnibus Trade and Competitiveness Act of 1988. The central theme of the Act is the need to promote U.S. exports to reduce the U.S. trade deficit, which was \$ 710 billion in 1987 and will be in the \$ 135-140 billion range for 1988; see introductory note by John H. Barton and Bart S. Fisher to U.S.: Omnibus Trade and Competitiveness Act of 1988, 281 ILM 15 (1989).
32. The USTR placed India, Brazil, the Republic of Korea, Mexico, the Peoples Republic of China, Saudi Arabia, Taiwan and Thailand on the priority watch list and seven other countries were put on watch list: Argentina, Canada, Chile, Colombia, Egypt, Greece, Indonesia, Italy, Japan, Malaysia, Pakistan, Philippines, Portugal, Spain, Turkey, Venezuela and Yugoslavia; 6 Int'l Trade Rep. (BNA) No. 22 at 719 (May 13, 1989).
33. Hart, The Mercantilist's Lament: National Treatment and Modern Trade Negotiations, 21 J. World Trade L. 37, 59 (1987).

States and have shown equal determination and vehemence in enforcing intellectual property rights.³⁴

The GATT Syndrome

The GATT syndrome in intellectual property rights is not only reflected in the constitution of the GATT but is equally evident from the manoeuvring of the industrialised countries to bring TRIPS on the GATT agenda, although essentially there are few articles in GATT which refer to TRIPS directly or indirectly.³⁵ GATT—a hybrid and the stop gap in regulating international trading relationships—having a membership of one hundred countries is still a slender reed round which the fabric of international trade has been so assiduously woven.³⁶ After negotiating seven international tariff and trade rounds,³⁷ and especially after the conclusion of Tokyo Round GATT found itself concerned with intellectual property rights when Ministerial Declaration of the GATT Contracting Parties called for an examination of the counterfeiting goods in the world trade.³⁸ The Declaration sought to determine whether GATT should take multilateral action on the trade aspects of commercial counterfeiting and by 1985 although general consensus developed that trade in counterfeit goods was a reality yet there was no agreement as to whether GATT should take any action in providing a multilateral framework in that respect.³⁹ However by 1986 the United States in collaboration with other OECD countries had persuaded the full GATT membership to include in URMNTN a mandate for negotiations on trade-related aspects of intellectual property rights. The mandate provided:

"In order to reduce the distortions and impediments to international trade and taking into account the need to promote effective and adequate protection of intellectual property rights and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade, the negotiations shall aim to clarify GATT provisions and elaborate as appropriate new rules and disciplines."⁴⁰

Initially this mandate was challenged by a significant number of LDCs such as India⁴¹ and Brazil who contended that GATT is not qualified for

34. See, *supra* note 21 at 2.

35. *Ibid.*, 21-26.

36. John H. Jackson, World Trade and the Law of GATT (1969): A.K. Koul, The Legal Framework of UNCTAD in World Trade (1977).

37. Geneva 1947, Annecy 1949, Torquay 1950, Geneva 1955, Dillon, 1960-61, Kennedy 1962-67, Tokyo 1973-1979. For these rounds, see John H. Jackson and William J. Davey, Legal Problems of International Economic Relations (1986).

38. See Thirty-Eighth session at Ministerial Level: Ministerial Declaration Adopted on 29 November, 1982, GATT BISD 29th Suppl. (1983).

39. See Turnbull, Intellectual Property and GATT: TRIPS at the Millennium, III Perpetory Rights 9 (1989).

40. For the text of the URMNTN, see *supra* note 8 at 583.

41. India submitted quite a few papers to URMNTN in this area, such as Enforcement

negotiating TRIPS, rather it is WTO which is the appropriate forum for negotiating intellectual property standards and not until 1989 did the LDCs agree to let negotiations on substantive standards proceed, reserving the issue of the GATT's competence to promulgate new rules.⁴² The industrialised countries draft proposals to the Negotiation Group on TRIPS stressed that intellectual property is a new negotiating area for the GATT and "must evolve with changing economic conditions and confront new trade policy"⁴³ and suggested specific recommendations on substantive standards in the area of patents, trade marks, copyright, trade secret, and semiconductor layout. These proposals further contemplated the mandatory adoption of minimum national enforcement standards, including provisions for border measures (e.g., import blocking and seizure), provisional remedies, and the expeditious resolution of disputes possibly a independent GATT dispute settlement mechanism to resolve intellectual property disputes.⁴⁴ By Midterm Review of the URMNTN in Montreal in December 1988⁴⁵, no worthwhile consensus on intellectual property framework was reached and by 14th May, 1990 Trade Negotiating Committee (TNC) had adopted a draft text that merely restated the fundamental disparity between industrialised the LDCs⁴⁶ reflected in four approaches. The four approaches were:

- (a) The Chairman's approach which conceives specification of reference of Trade-Related Intellectual Property Rights—DOC, No. MTN. GNG/NGII/W/41; (1989). Applicability of the Basic Principles of the GATT and the Relevant International Intellectual Property Agreements or Conventions, DOC. No. MTN. GNC/NHII/W/39, (5th September, 1989). Multilateral Framework for International Trade in Counterfeit Goods—Doc. No. MTN. GNG II/W/41. (1989).
42. Trade Related Aspects of Intellectual Property Rights, including Trade in Counterfeit Goods, GATT TNC DOC. MTN TN/7C (December 9, 1988) hereinafter referred as Montreal Text.
43. For US proposals, see Basic Framework, *supra* note 17 at 1347; For EEC proposals, see GATT DOC MTN. GNG/NGII/W/26 (July 1988); for Madinese proposal, see *supra* note 17; For Swiss proposal, see GATT TRIPS DOC. MTN. GNG/NGII/W/25 (June 29, 1988).
44. The GATT Codes after the Tokyo Round are using a number of independent settlement mechanisms including the codes on anti-dumping and subsidies; see Agreement on Implementation of Article VI of the GATT (Anti-dumping) GATT, BISD : Twenty sixth Suppl. Art. 15, 171 (1980); Agreement on Interpretation and Application of Articles VI, XVI and XXIII (Subsidies) Id. Art. 13, 18 at 56.
45. The URMNTN Mid-term Ministerial Review took place in Montreal in December 1988. The purpose of the high-level review session was to reach agreement on broad framework texts in the fifteen areas that are the subject of negotiations; these text would provide the basis for subsequent and more specific negotiations on final agreements; see GATT Focus 59 (1988); USITR, GATT Uruguay Round Mid-term Agreements Activised (April 8, 1989).
46. See, 5 Int'l Trade Rep. (BNA) 1554 (No. 30, 1988); For the draft text, see Trade Related Aspects of Intellectual Property Rights, including Trade in Counterfeit Goods, GATT TNC DOC. MTN. TNC/7 (MIN) 21 (Dec. 9, 1988) hereinafter referred as Montreal text; see also communications from Argentina, Brazil, India and other LDCs : MTN. GNG/NGII/W/71 (14 May, 1990).

points regarding the availability, scope and use of intellectual property rights, in the light of the need to reduce trade problems arising from excessive, discriminatory or inadequate protection of intellectual property.⁴⁷

- (b) The LDCs approach that strongly reiterated opposition to the negotiation of substantive standards.⁴⁸
- (c) The United States approach for negotiating norms of substance and enforcement that reserved, however, the eventual format for institutional implementation.⁴⁹
- (d) The proposal that appeared to reflect the European Community and Swiss Viewpoints that provided for negotiation of norms of substance and enforcement without reference to a particular institutional arrangement.⁵⁰

Although, agreement was announced in Geneva on a so called framework text reconciling the above stated diverse approaches, yet there is no clear indication of a fundamental shift in LDCs opposition to the industrialised country intellectual property protection programme.

GATT Articles and Intellectual Property Rights

The generally recognised basic principles of GATT are most-favoured-nation treatment (m.f.n), national treatment, protection through tariffs, stable and predictable basis for trade, transparency, and differential and more favourable treatment of LDCs. The m.f.n commitment under GATT imposes obligation on contracting parties.

Customs duties and charge of any kind imposed on importation, exportation and international transfer of payments for imports or exports: the method of levying such duties and charges; all rules and formalities connected with importation and exportation, all matters referred to in Article 111, paragraph 2 and Article 111, paragraph 4 (which cover internal taxes and regulatory laws); and all of these apply only to products. Any advance, favour, privilege or immunity granted by any Contracting Party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating or destined for the territories of all other contracting parties. This principle of non-discrimination as between countries applies to international trade in product while in the case of intellectual property regime, it is the rights of persons which are protected. The former is also concerned with border measures pertaining to physical objects, the latter is concerned with the protection of intangible rights within national territories. It may, therefore, be

47. See, Montreal text, *supra* note 46 at 21.

48. *Ibid.*, at 22.

49. *Ibid.*, at 22-23.

50. *Ibid.*, at 23-24.

concluded that these articles are clearly inapplicable to intellectual property rights. However, the industrial countries while introducing TRIPS in the GATT seem to suggest that m.f.n. treatment and obligations thereunder should apply to intellectual property rights also.⁵¹

Article III of the GATT (National Treatment) concerns with, that once products have been imported into a country (that is to say, once they have crossed the border and entered the domestic market), the imported products will be accorded the same treatment as "like" products of national origin with respect to matters under government control, such as taxation and other regulations. Whether it is tax or non-tax aspects, the national treatment obligation in GATT pertain to international trade in like products, and not to persons. The Contracting Parties have recognised that "the national treatment obligations of Article III of the GATT do not apply to foreign persons or firms but to imported products."⁵² The principle of national treatment is therefore equally inapplicable to intellectual property rights. The industrialised countries want that this article should apply to intellectual property in the same way as it is applying to importation and exportation of products across the countries.

Article IX—Marks of Origin—attempts in its first five paragraphs to ensure that marking requirements are not used to hamper international trade unnecessarily or do discriminate between Contracting Parties. However, paragraph 6 of Article IX refers to preventing the use of trade names in such manner as to misrepresent the true origin of a product to the detriment of such distinctive regional or geographical names of products or the territory of a Contracting Party as are protected by its legislation. This article broadly suggests its application to promote the protection of intellectual property rights.

Article XI of the GATT—General elimination of Quantitative Restriction—deals with the basic proposition that where protection is to be given to domestic industry, it should be extended essentially through customs tariffs and not through other commercial measures. Inherent in this principle is the recognition of the superiority of tariffs as a commercial policy instrument in comparison to quotas, imports or exports licences or other measures that prohibit or restrict imports and exports. This important principle of the GATT has no relevance for intellectual property rights.

Article XII—Restrictions to Safeguard Balance of Payments—in clause (3) refers to expansion of international trade and Contracting Parties are obliged to pay due regard to the need for maintaining or restoring equilibrium in their balance of payments on a sound and lasting basis and to the desirability of avoiding uneconomic employment of productive resources.

51. See, GATT Activities : US Submission to the Negotiating Group on Trade-Related Aspects of Intellectual Property Rights, including Trade in Counterfeit Goods, 2 World Intell. Prop. Rep. (BNA) 209 (November 1988).

52. GATT, BISD 30th Supplement 140 (1977).

However, Article XII (3) (111), read with XVIII (10) requires that import restrictions employed to safeguard the balance of payments should not be applied so as to "prevent compliance with patent, trade mark copyright or similar procedures."

Article XX—General Exceptions—conceive of certain measures which can be excepted from the GATT operation and allows Contracting Parties to take measures for the enforcement of intellectual property rights that normally would be inconsistent with the GATT. These measures must be necessary to secure compliance with intellectual property laws and regulations and may not be applied in a discriminatory manner or as disguised restrictions on international trade. The substantive intellectual property law being enforced must be GATT consistent.

Article XXX(d) does not oblige Contracting Parties to adopt any enforcement measures; it only ensures that GATT obligations do not stand in the way of effective enforcement of intellectual property legislation.

Articles XXII and XXIII—Consultation, Nullification or Impairment of Benefits—could be related to intellectual property rights. Under the rule of consultation, all Contracting Parties have a right to be heard and consulted in respect of any matter affecting the operation of GATT as well as any other matter for which it has not been possible to find a satisfactory solution. Therefore, the presumption is that GATT under the consultation provision could take up the intellectual property questions. Article XXIII can be invoked in any case in which a Contracting Party believes that its GATT rights have been nullified or impaired by another Contracting Party's action or that the attainment of any objective of the Agreement is being impeded as a result of the failure of another Contracting Party to carry out its obligations under GATT; or the application by another Contracting Party of any measure, whether or not it conflicts with the provisions of this Agreement, or the existence of any other situation. If so satisfactory adjustment is effected between the Contracting Parties, the matter may be referred to the Contracting Parties and the Contracting Parties may consult the Economic and Social Council of the United Nations for finding out a proper solution. Whether or not intellectual property rights could be invoked under these articles is debatable, yet intellectual property rights disputes have been decided by the GATT under these articles. These disputes concerned the United States Manufacturing Clause⁵³, Section 337 of the United States Tariff Act of 1930 (in two instances)⁵⁴ and Japanese labelling practices on 55 imported wines and alcoholic beverages.⁵⁵

In a recent case of a different kind, the GATT Council agreed to set up a panel to consider Brazil's complaint against measures taken by the United

53. See, United States Manufacturing Clause : Report of the Panel Adopted on 16 May, 1984; Reprinted in GATT, BISD, Thirty First Suppl. 74 (1983-84).

54. See, Conciliation : United States—Imports of Certain Automotive Spring Assemblies : Report of the Panel Adopted on 25 May, 1983; GATT, BISD Thirtieth Suppl. 107, 126-127 (1984).

55. *Ibid.*

States in retaliation for alleged inadequate protection of United States patent rights in Brazil.⁵⁶

The principle of according special and differential treatment to LDCs in order to promote their economic development is clearly recognised in GATT.⁵⁷ Article XVIII of GATT, accordingly gives flexibility to LDCs for introducing and maintaining restrictions for safeguarding the external financial position and for promoting the establishment of particular industrialised developed countries for stimulating expansion of the export earnings of the LDCs. In the Enabling clause, it has been provided that notwithstanding to provisions of Article I of the GATT, Contracting Parties may accord differential and more favourable treatment to LDCs, without according such treatment to other Contracting Parties. These provisions may be interpreted to the extent that LDCs should not be obligated to correspond to the high standards of intellectual property rights of the industrialised countries.

From these provisions it can be inferred that generally recognised principles of GATT excepting transparency and differential and more favourable treatment for LDCs, which have their own validity even otherwise are clearly inapplicable to intellectual property rights. Also, no GATT provision obliges Contracting Parties to accord any particular level of protection to intellectual property rights or to enforce them to any particular degree of effectiveness. The only GATT provision referring to intellectual property rights, Article IX(6) as described above is limited in scope and the amount of protection guaranteed by Article IX(6) requires that the substantive law and the related enforcement measures be non-discriminatory as between the products of different Contracting Parties and not operate so as to protect or favour domestic products, except where enforcement measures can be justified under Article XX(d).

Less Developed Countries Responses

The LDCs responses to the GATT negotiations has been either hostile or at best lukewarm. LDCs initial reaction was that the industrialised countries should not be allowed to change the existing international regime of intellectual property protection to their detriment as it was beyond the legal mandate of TRIPS negotiations in URMTN. The LDCs accepted the existence of a clear mandate to negotiate trade in counterfeit goods, but these negotiations should be restricted to the examination of the trade effects of counterfeiting without entering into the discussion of "what constitutes counterfeiting".⁵⁸ LDCs opposed the attempt to transform the TRIPS

negotiations into "an exercise to set standards of protection of intellectual property rights or to attempt to raise the levels of such protection under existing multilateral agreements through the strengthening of enforcement procedures....."⁵⁹ LDCs emphasised their strong support for the existing international agreements administered by WIPO—the Paris Convention, the Berne Convention, the Madrid and Lisbon Agreements and the Universal Copyright Convention.⁶⁰

The LDCs perceive that to bring TRIPS on the GATT agenda is an attempt by the industrialised countries to control the diffusion of new technologies of which they have a monopoly, as a weapon to establish both economic and political leadership of the industrialised countries on the LDCs.⁶¹ The next goal of the industrialised countries would be to freeze the existing international division of labour by way of the control of technology transfers to the LDCs and as the Transnational Corporations (TNCs) are the monopolists of intellectual property rights, these TNCs would automatically be major beneficiaries.⁶²

The LDCs reject the industrial countries philosophical claim and the natural law theory of providing a firm basis to intellectual property on the ground that it is "economic expediency" which has usually dominated the philosophical and natural law considerations.⁶³ The prosperity and the wealth of the industrialised countries arose and developed in absence of a fully protected intellectual property rights in earlier periods of their economic growth and the present debate is an attempt by the industrialised countries to protect their assets and national wealth in the LDCs markets.⁶⁴

The political economy of LDCs does not warrant a complete ban on pirated works as these might be supporting the critical sectors of their economy and exclusion of pharmaceuticals products from patent protection may have resulted from conscious policy choice of lower drug prices.⁶⁵ This has been best stated in the words of Indira Gandhi, late Prime Minister of

in the New GATT Round, in Intellectual Property Rights : Global Consensus, Global Conflict ? 41 (R. Gadgaw and T. Richards eds. 1988).

59. See, Carlos Alberto Prieto Braga, The Economics of Intellectual Property Rights and the GATT : A View from the South, 22 *Var'd J. of Tr. Law* 243 at 250 (1989).

60. These Conventions have briefly been discussed in the beginning of this article. According to India, WIPO is the appropriate forum for the negotiation of TRIPS. Indian Proposal, see GATT, 6 *Int'l Trade Rep. (BNA)* 953 (July 19, 1989).

61. Rostow, is there need for Economic Leadership ? Japanese or U.S. ? 75(2) *Am Econ. Rev.* 285 (1985).

62. See A.K. Koul, UNCTAD Code on Transfer of Technology : An Analysis in Legal Perspectives, 20 *Foreign Trade Review* 141-162 (1985); see also A.K. Koul, The MNCs : Bonanza or Sources of Illusions for the Economies of the Developing Countries ? 2 *Review of Contemporary Law* 11-30 (1981).

63. See *supra note* 59 at 253.

64. See Federick M. Abbott : Protecting First World Assets in the Third World : Intellectual Property Negotiations in GATT Multilateral Framework, 22, *Vol. J. of Transnational Law* 689-745 (1989).

65. *Id.* at 713.

56. See, Bliss, The Amendment to Section 301 : An Overview and Suggested Strategies for Foreign Response, 20 *Law and Pol'y Int'l Bus.* 0501, 516-517 (1989).

57. See, A.K. Koul, *supra note* 36, Chapter 11.

58. Statement of Brazil to the Negotiating Group on TRIPS, including Trade in Counterfeit Goods, (March 25, 1987). Gadgaw and Gwynn, Intellectual Property Rights

India as "(T)he idea of a better-ordered world is one in which medical discoveries will be free of patents and there will be no profiteering from life and death."⁶⁶

The LDCs assert that the assumed losses by the industrialised countries is highly uncertain and several attempts to quantify the intellectual property losses are highly extrapolated, rather it is the margin of profit which has increased so much that the industrialised countries TNCs want more protection especially in sectors such as chemicals, pharmaceutical, computer software and entertainment (audio-video).⁶⁷ Evidence shows that foreign patents become vehicles of import monopolies in the LDCs, while locally worked foreign patents seldom produce diffusion of technology much needed in LDCs, and thus recognition of foreign intellectual property rights inhibits rather than stimulates local innovation.⁶⁸

The LDCs as a group prefer to maximise opportunities afforded by their present freedom of action under a loosely regulated international intellectual regime to adjust their intellectual property laws to their own developmental needs as the industrialised countries have done at their earlier stages of development.

The LDCs should argue that intellectual property rights are the common heritage of mankind and international minimum standards could be negotiated only within the existing framework of WIPO wherein the demands of the LDCs as New International Economic Order (NIEO) paradigm are adjusted. More specifically, the demands of the LDCs in reshaping the international economic order should be met ensuring a balancing of interests between the recipient states and foreign patent owners; promoting actual working inventions in the recipient countries and improving the conditions for the transfer of technology of fair terms, and for avoidance of restrictive business practices.⁶⁹

India's Position in URMFTN

At the beginning of URMFTN India⁷⁰ strongly resisted the move of bringing TRIPS on the agenda of URMFTN. India argued that it is only the restrictive and anti-competitive practices of the owners of intellectual property rights that can be considered to be trade related because they alone distort or impede international trade. As the intellectual property system

66. See *supra* note 59 at 253, n. 46.

67. See generally, *supra* note 64, 689-745.

68. See A.K. Koul, UNCTAD Code on Transfer of Technology, *supra* note 62 at 141-142.

69. *Ibid.*

70. India's position in URMFTN has been depicted in the papers submitted by India to URMFTN such as Enforcement of Trade-Related Intellectual Property, DOC. No. MTN. GNG/NG11/W/40 (1989) and the paper, Standards and Principles Concerning the Availability, Scope and Use of Trade Related Intellectual Property Agreements or Conventions. DOC. N. MTN. GNG/NG11/W/39 (1989).

has wide ranging implications for social economic, technological and developmental aspects of LDCs, any principle or standard relating to intellectual property should be carefully tested against such aspects.⁷¹ In essence, the intellectual property system is monopolistic and restrictive conferring exclusive rights on their owners, patent protection is a mechanism for advancing certain industrial policies and thus the countries at different stages of development must retain the flexibility in their patent system to take into account disparities in their economic development.⁷² Even assuming that patent system plays a part in promoting inventive activity and diffusion of technical knowledge, the protection of the exclusive rights of the patent owner is only one side of the coin. Experience of LDCs clearly shows that a patent system can have serious adverse effects in sectors of critical importance to them, such as food productions, poverty alleviation, nutrition, health care and disease prevention. The patent system can also have a dampening affect on the promotion of domestic research and development and the building up of domestic technological capabilities. It is, therefore, imperative that the protection of the monopolistic rights of the patent holder is adequately balanced by the socio-economic and technological needs of the country.⁷³

India argued that exemptions from patent protection in areas such as pharmaceuticals, food products, chemicals, microorganisms, and agriculture machinery and methods must be permitted. Every country should...be free to determine both the general categories as well as the specific products sectors that it wishes to exclude from patentability under its national law taking into consideration its own socio-economic, developmental, technological and public interest needs. It would not be rational to stipulate any uniform criteria for non-patentable inventions applicable alike to industrialised and developing countries or to restrict the freedom of developing countries to exclude any specific sector or product from patentability.⁷⁴

India argued for permissive compulsory licensing, particularly in cases of non-work, and argued especially for "licences of right" in areas such as food, pharmaceuticals, and chemicals, where the conduct of the patent owner will not be in issue i.e. licences will be automatically granted without judicial review. The law of the host country would be used with references to licences of right to determine fair compensation and there should not be a uniform patent term on grounds of developmental disparities.⁷⁵

With respect to trade marks, India argued that foreign trade marks may adversely affect the allocation of resources in LDCs and should be subject to regulation in accordance with national developmental objectives. Whether a trade mark is "well known" should be determined on a country

71. *Ibid.* Standards and Principles, Paras, 3, 7, 8 and 17.

72. *Id.* para 19 at 9.

73. *Id.* para 19 at 9.

74. *Id.* para 38 at 14.

75. *Id.* para 43 at 16.

by country basis. Trade secrets cannot be regarded as intellectual property and should be dealt with by civil and contract law. Berne Convention is "more than adequate to deal with copyright protection". Based on the adoption of the Integrated Circuit Treaty, India concluded that the issue of protection of layout has been already provided for and it is now left for implementation by the signatories.⁷⁶

Thus, in view of the foregoing points raised, India argued: "It would... not be appropriate to establish within the framework of GATT any new rules and disciplines pertaining to standards and principles concerning the availability, scope and use of intellectual property rights."⁷⁷

India, on account of pressures applied by United States and being named under section 301 of the Omnibus and Trade and Tariffs Act of 1988, accepted the principle of policing trade-related aspects of intellectual property within the GATT.⁷⁸ However, India made clear that it was referring to measures that might be implemented at national borders, and not to the negotiations of uniform intellectual property norms. Outwardly this appears to be a concession on the part of India, yet it does not appear to represent a basic modification of India's objection to the negotiation of host country substantive norms.⁷⁹

The Negotiating Issues and the Future

As already discussed how GATT Constitution was turned and twisted to accommodate TRIPS at the behest of the industrialised countries and the draft text adopted by the TNC, basically four approaches got reflected with four major substantive negotiating issues carrying the fundamental disparity and conflictual situations between industrialised and LDCs. These issues are:

- (1) Substantive standards or norms of intellectual property protection;
- (2) Procedures under national law for the enforcement of intellectual property protection;
- (3) Dispute settlement procedures between parties to any eventual agreement on TRIPS; and
- (4) The relationship between GATT and other relevant international organisations including WIPO, concerning TRIPS and the relationship between an eventual agreement in the URMTN and the existing intellectual property rights.

As regards substantive standards the LDCs are pitted completely against the industrialised countries and some of the proposals to the TNC and

76. *Id.* para 44 at 16.

77. *Id.* para 47 at 18.

78. GATT, India Accepts Policing of Trade Related Intellectual Property Rights in MTN Talks, 6 Int'l Trade Rep. (BNA) 1176 (September 28, 1989).

79. *Id.*

detailed above envisage negotiation of commitments for a wide range of intellectual property rights such as patents, copyright and related neighbouring rights, trade marks, industrial designs, trade secrets, the layout design of semiconductor integrated circuits, and geographical indications, including appellation of origin. Since trade policy is only a minor consideration to the LDCs, this author does not know the appropriateness of negotiating on standards in the GATT context and how far these issues are really trade-related. It is also a fact that negotiating standards would prejudice other complementary initiatives taken in WIPO or elsewhere. The basic framework of GATT is to manage orderly trade across the boundaries and reduce distortions to international trade, the raising of intellectual property standards may put obstacles to trade discrimination amongst the countries. At best the URMTN should have addressed to trade distortions or impediments arising from the abusive or loose use of intellectual property regime. It is difficult to concede that higher levels of intellectual rights would yield benefits to both—industrialised and LDCs.

So far as procedures for the enforcement of intellectual property under national law are concerned, this author is not sure as to what shape the enforcement of intellectual property rights in national legislation will take place. In case a treaty is worked out under the auspices of GATT or as its appendage, the problem of territoriality under international law would definitely arise. In case GATT Constitution is amended to incorporate enforcement mechanism the settlement of disputes would equally be contentious in addition to the problem of how to amend GATT. This author believes that there is a need to create a multilateral framework of rules and disciplines on international trade in counterfeit goods which may take care of most of the trade problems that have been identified in TRIPS negotiations. Enforcement measures should not be allowed to amount to as disguised restrictions on legitimate trade and there is a real need to look into this matter in more detail and intensively.

The issue of the procedures for settlement of disputes between governments over their respective international legal obligations in connection with intellectual property rights is two dimensional. The first dimension concerns with the wide spread belief that public international law does not provide an effective method of settling disputes between governments which is reflected more in international intellectual property regime. The second dimension is the functional efficacy of GATT settlement of disputes procedure and practice. This author does not believe that in the event GATT settlement of disputes procedure is applied to TRIPS that may develop a linkage between obligations on the standard of intellectual property protection and rights to market access, through the possibility of authorised retaliation which may ultimately not suit TRIPS.

The roles of WIPO, GATT and other international institutions dealing with intellectual property rights are important issues both in terms of jurisdictional congruities as well as in building a future multilateral framework.

WIPO needs to be further strengthened whereas GATT's involvement should be restricted to the minimum in the totality of the outcome of negotiations.

At best, one can conclude that these are complex issues which need to be explored further in the complex international economic, social and cultural phenomena, wherein the United States is trying to translate its domestic provisions into international standards. The future should take care of enhanced intellectual property protection within or without the GATT keeping in view the industrialised countries interests as well as accommodating the LDCs needs in an objective and realistic manner.

IMPLICATIONS OF THE LINKAGES BETWEEN JUVENILE DESTITUTION, LABOUR AND DELINQUENCY FOR 'JUVENILE JUSTICE' IN THE CONTEMPORARY INDIAN SOCIETY

B. B. PANDE*

JUVENILE DESTITUTION, labour and delinquency are interrelated phenomena. But so far there has been little scientific exploration of the linkages between one phenomenon and another. The main reason for the lack of such critical examination of the linkages has been the dominant ideology and the associated methodology that perceives each phenomenon in isolation and organises around each one of them formal as well as non-formal regimes designed to tackle the 'problems' in a piecemeal manner. The present paper aims at establishing that there exists a strong linkage between juvenile destitution, labour and delinquency, that the linkage has both positive as well as negative implications, and that the formal approach of dealing with each phenomenon in isolation substantially limits the success of the measures within each regime.

I. THE MAGNITUDE OF JUVENILE DESTITUTION, LABOUR AND DELINQUENCY

Juvenile Destitution

With approximately 40 per cent of population below the age of 15 years, India is one of the few countries with a large child population. According to an expert estimate by the end of 1990 the child population would be somewhat near 280 million or 36.77 per cent of the total population of 800 million.¹

Out of the 280 million children approximately 40 per cent would fall within below poverty line population (the percentage could be larger, because poor people tend to have larger families). Thus, approximately 125 million children drawn from poor families, lower caste groups could be estimated to be in different levels of destitution. In addition to these physically and mentally handicapped children could also be identified as destitutes. These juvenile destitutes may be located in rural areas, where they might constitute seasonal labourforce, partially self employed in cattle grazing and wood and grass gathering activities or be a part of the urban, marginal population that remains perpetually unemployed or underemployed. However, in

* Professor of Law, Faculty of Law University of Delhi, Delhi-110007, India.
1. J. P. Ambannawar, *Population, Second India Studies* (1975).

view of existing socio-economic realities, particularly near total absence of any kind of social security, every juvenile destitute is compelled to indulge in some kind of paid (in cash or kind) work in order to avoid starvation. That makes juvenile destitution and juvenile labour almost overlapping phenomena. Furthermore, in view of the introduction of the capitalist mode of production in the agricultural sector, followed by mechanization, there is bound to be a significant inflow of rural juvenile destitutes to urban areas, which in turn is likely to increase the number of destitutes substantially.

Juvenile Labour

Juvenile labour phenomenon is an invariable outcome of destitution and poverty, because "child labour exists in inverse relation to the degree of economic advancement of a society, country or region".² The factor of poverty leading to child labour may be associated with indebtedness of the family, unemployment of parents, low wages etc.³ In addition to this in certain situations child labour could also be an outcome of agrarian pattern, caste system⁴ norms of social obligation, parental attitudes etc. Referring to the magnitude of child labour according to the 1981 Census of India the child labour population was estimated to be 11.20 million. But the National Sample Survey (32nd Round) estimated the child labour population in March 1983 to be 17.36 million. The Operations Research Group, Baroda (in 1983) estimated child labour to be 44 million and the Concerned for Working Children, Bangalore in 1985 estimated the child labour population to be 100 million. The vast difference in the child labour estimates can be explained by the variation in the definition of child labour. The Census of India 1981 relates only to main child worker (those who have worked during the major part of the year) and excludes marginal workers (those who have not worked during the major part of the year).

A significant fact about child labour phenomenon is that in the post-independence development period the incidence of child labour has increased in almost all occupations, as the Table I indicates.

Though the statistics reveals a decline in child labour in factories and other industrial establishments, subjected to the child labour exclusion laws, more suited to adult labour force, but in the same period a much larger number of child labour has entered the unorganised sector where he faces much worst conditions of work and economic returns.⁵

2. Elias Mendeljevich, *Children at Work*, ILO, Geneva, 1979.
3. National Institute of Public Cooperation and Child Development, *Study of Working Children in Bombay* (1978).
4. D.A. Naidu, "Micro-determinants of Child labour : An Evidence from Rural South India", *Seminar on Child Labour and Health*, (mimeo, 1982).
5. B.N. Juyal, et al, *Child Labour and Exploitation in Carpet Industry : A Mirzapur-Bhadohi Case Study*, Indian Social Institute, New Delhi, (1987).

Table I Child Labours in Various Occupations (In thousands)

Occupations	Year	
	1971	1981
Cultivation and Agriculture	8458	8786
Livestock, Fisheries, Livestock	885	704
Mining, Quarrying and Construction	83	1056
Manufacturing, Processing, Servicing and Repairs	253	278
Other services	406	326

Source : Census of India 1971 and 1981.

Juvenile Delinquency

Unlike juvenile destitution and labour, juvenile-delinquency is mainly an urban phenomenon closely associated with industrialization and urbanization. A significant feature of juvenile delinquency phenomenon is its markedly low incidence, both in absolute terms and also in comparison with the total crime picture. Also there has been no appreciable increase in delinquency rate in the last decade or two (see table 2). The official statistics relating to delinquency and the overall tolerant public attitude towards the maladjusted juveniles (United Nations Social Defence Research Institute, 1984) confirms the finding that "delinquency is (at least relatively speaking) not a social problem in India, either in a behavioural or societal-reaction sense".⁶ However, a notable feature of Indian juvenile delinquency is its close relationship with low economic status families. According to official statistics relating to socio-economic background of juvenile delinquents, out of 1,65,451 juveniles apprehended in 1986, 50.6 per cent belonged to families whose monthly income was less than Rs. 150/- (approximately 9 U.S. dollars). Similarly 41.4 per cent of the juveniles apprehended were illiterate.⁷ Such evidence regarding the low-income family background of a majority of delinquents establishes a clear link between delinquency and destitution among juveniles.

II. BI-POLAR INFLUENCE OF THE LINKAGES

(a) *Juvenile destitution*: A cause and effect of juvenile labour. As a phenomenon associated with underdevelopment and backward economy, juvenile destitution is a notable cause of juvenile labour, both in the rural as

6. Clayton A. Hartgen, et al, *Delinquency in India* (1984).
7. *Crime in India 1986*, National Crime Records Bureau, Ministry of Home Affairs, Government of India, 1989 at p. 89.

Table 2. Total Cognizable crime under IPC, Juvenile Crime under IPC, Proportion of Juvenile Crime to total crime and volume of Juvenile Crime per one lakh Population

Year	Population in millions (Estimated mid-year)	Total cognizable crime under IPC	Total Juvenile crime cases under IPC	% of Juvenile crime to total cognizable crime	Juvenile crime per lakh of population
1976	613.3	10,93,897	37,015	3.4	6.0
1980	663.6	13,68,529	55,129	4.0	8.3
1981	690.1	13,85,757	61,019	4.4	8.8
1982	705.2	13,53,904	59,345	4.4	8.4
1983	720.4	13,49,866	55,473	4.1	7.7
1984	737.6	13,58,660	42,803	3.2	5.8
1985	750.9	13,84,731	49,317	3.6	6.6
1986	766.1	14,05,835	55,887	4.0	7.3

Source: *Crime in India*, 1986, National Crime Records Bureau, Ministry of Home Affairs, Government of India, at p. 66.

well as urban set-up. Ordinarily childhood is a life stage for learning, education and full mental and physical growth. But for the children drawn from lower socio-economic strata, the stark survival reality is very different. They must sell their labour power at an early age to ensure physical survival for themselves and their families. This aspect of the linkage between destitution and labour has become particularly crucial in the post-independence period, which has witnessed large scale increase in total child labour population, particularly in the unorganised sector. This trend is also indicative of the continued impoverishment of the child population. There is yet another aspect of the relation between the two phenomena, and that is child labour being a cause of destitution. The second aspect of the linkage is indicated by child labour statistics in different states, particularly its relationship with literacy rate. The state of Kerala had the lowest child labour population of 1.3 per cent of total child population in the state, which also had the highest literacy rate amongst the Indian states. This means the rate of literacy (an anti-thesis of destitution) and the incidence of child labour are inversely related to each other.

(b) *Child labour exerting a positive as well as negative influence on delinquency*: Little scientific exploration has undergone to examine the linkage between child labour and juvenile delinquency. The two phenomenon can have positive, negative or neutral type of relationship with each other. A traditional line of thinking holds that premature freedom associated with child labour leads the child into delinquent ways.⁹ It is true that certain

8. S. Banerjee, *Child Labour in India*, Anti Slavery Society London.

pre-delinquent behaviours such as smoking, drinking and other vices might be directly attributed to child labour in a large majority of cases, but there is yet no conclusive research to indicate that child labour encourages all forms of delinquencies. On the contrary the official reporting of almost uniformly low incidence of delinquency during a period of steep rise in child labour indicates a negative influence on delinquency rate. In the same vein a limited empirical study of the inmates of a juvenile institution in Delhi has established a negative correlationship.⁹

III SUBJECTING THE PROBLEM JUVENILES TO ISOLATED FORMAL REGIMES

From the beginning of this century there emerged a trend of identifying the respective problems of juvenile destitution, labour and delinquency as independent social problems and develop around each formal regimes comprising of policies, administrative measures and schemes, legal frameworks, institutional structures and agencies. Each of these formal regimes in turn reflected the ideas of the ruling class and the values and attitudes of the society.

The destitute juveniles were, at least in theory, subject to a wide and diverse variety of measures concerned with their welfare, health and nutrition, education and training, special measures for off-setting physical and mental handicaps, maintenance, guardianship and adoption etc. However, till the 1970's, when the National Policy on Children, 1974 was formulated, the formal regime concerning the destitute juvenile had no integrated common approach in respect of the various destitution combating measures. Even in respect of measure like education and training, which vitally influences destitution as well as child labour, the formal policy and performance was, at best, half-hearted. Though in the three decades after 1950 the number of enrolment in primary education considerably increased, from 42.6 per cent in 1950-51 to 85.5 per cent in 1978-79, but the total enrolment of 90.3 million in 1978-79 was far below the expected target of 170 million by 1991. Furthermore, even the limited success of this destitution combating measure was considerably undermined by high drop-out rates of the majority of low caste, low income family children, of whom 63.1 per cent dropped out before primary school level and 85 per cent before the middle school level.

On account of its intimate relationship with the system of production, child labour has been for a long time subjected to direct or indirect formal measures. The earliest measure in this area was the Apprentice Act, 1950, that authorised the training and apprenticeship of destitute and orphan children under court orders. Obviously this measure indirectly legitimised the child labour practice, which hitherto had remained confined to family labour or debt obligation labour, in the plantations and other industries.

9. Davinder Bagga, *Juvenile Delinquents in Delhi—An Empirical Analysis*, (unpublished I.L.M. Dissertation, Faculty of Law, University of Delhi (1986)).

The vulnerability of the child labour and the systemic compulsions of upholding certain humanitarian values led to the introduction of a variety of measures relating to conditions of child labour, exclusion of child labour from specific industrial enterprises and subjecting child labour to certain minimum standards. Despite all those measures child labour, by and large, continued to remain at the mercy of market forces. That is why in the post-independence developmental phase the incidence of child labour phenomenon registered a steep rise. However, the formal regime continued to assess the success of its measures on the official statistics registering a decline, either on the basis of a newly coined main child labour definition or on the basis of decline in the organised sector only. For instance, as indicated by Table 3, according to 1961 Census for children of 6-14 years there were 17 million workers, 47 million educants and 37 million idlers. In comparison in 1971 for the same categories, the numbers changed to 11 million, 46 million and 43 million respectively. This means that from 1961 to 1971 the number of child labour in organised sector registered a sharp decline from 17 million to 11 million, but during the same period the number of idlers rose from 37 million to 43 million. The statistics give no idea of the reciprocal rise in the number of child labour in the unorganised sector.

The juvenile delinquents are subjected to most comprehensive and elaborate formal regime, which is inspired by the dual considerations, often contradictory, of controlling the troublesome sections of the child population and securing justice to them (the recently enacted Juvenile Justice Act, 1986 appears to have tilted the balance in favour of the 'justice' consideration). Since the main emphasis of the earlier Children Acts, and now the Juvenile Justice Act, is to provide a comprehensive and exclusive juvenile justice system not only for the delinquent juveniles but also for many other categories of pre-delinquent (designated as neglected juveniles under the Act) children, the problem of delivering 'justice' in isolation has created new dilemmas. The first level dilemma relates to operationalizing the 'juvenile justice' notion itself. One view in this regard is to think of juvenile justice strictly in terms of the limited section of child population that comes within the ambit of the Act (which according to 1986 statistics comes to

TABLE 3 Number (in millions) of children aged 6-14 by activity in India 1961-71

Census Year	Workers		Educants		Idlers	
	M	F	M	F	M	F
1961	16.9	12.2	45.9	23.2	37.2	64.6
1971	11.3	4.5	46.0	27.5	42.8	68.1

Sources : 1. All India Tables (One per cent sample data)
2. Census of India, 1961 part II-A and II-B.

1,65,451). But doing justice to this section in disregard of the existential realities faced by the other sections of juveniles, who are compelled to remain idle or driven to join the ranks of child labour, is neither desirable nor logical, unless 'juvenile justice' is understood in very technical sense. Furthermore, the recent trend of extending the operational scope of the juvenile justice law by giving a wider meaning to neglected juvenile and resorting to positive state action in regard to him, has further accentuated the dilemma of 'juvenile justice'. The recent police action in respect of juveniles living in and around brothels in Delhi would illustrate the point. The police justification for arresting 112 male and female juveniles was that the Juvenile Justice Act, 1986 contemplates positive state intervention in order to save the juveniles from the pernicious and morally debasing environment, even though some of the juveniles were living with their prostitute mothers. Such a view of juvenile justice' advocates institutionalized approach to juvenile justice. But findings of significant studies such as "what has been demonstrated is the persisting and enduring positive influence of the family and culture in providing the cohesion and solidarity necessary for the prevention, control and treatment of juvenile social maladjustment inspite of the negative influence of poverty, overcrowding, unemployment and urbanization"¹⁰ favour a clear and decisive movement for a non-institutionalised approach to the problems.

10. *United Nations Social Defence Research Institute*, "Juvenile Social Maladjustment and Human Rights in the Context of Urban Development", Publication No. 22, Case Study No. 4, Rome, 1984 at p. 225.

CAUSING DEATH UNDER THE INDIAN PENAL CODE : A COMPARATIVE ANALYSIS

STANLEY YEO*

SUMMARY

THE PRINCIPLES governing causal responsibility for the death of a human being remain obscure and poorly developed by the courts. Clearly thought out principles are required to achieve just and consistent results. This article extracts these principles from case authorities and commentaries from India, and other jurisdictions including England and Australia. It advocates the use of the foresight test for causation alongside the substantial factor test to resolve difficult cases involving intervening causes. The proposal is also made for these tests to be expressed in the Indian Penal Code for the guidance of the courts.

The definition of culpable homicide under s.299 of the Indian Penal Code includes the requirement that D (the accused) had caused the death of V (the victim).¹ This is likewise an integral element of the offence of causing death by a rash or negligent act under s.304A of the Code. In a vast majority of cases, the requirement of causation is clearly proven and is resolved *sub silentio*. However, there are cases where a separate issue of causation presents itself for determination. In some of these cases, this issue may be unresolved because the prosecution decides not to proceed with a charge of the most serious possible offence, such as where D assaults V who dies when the driver of the ambulance he is travelling in collapses from a heart attack. The issue of causation may also be sidestepped by a court acquitting D on the basis of lack of proof of the fault element such as intention, knowledge, rashness or negligence. Given its significance as a legal requirement, however the law should be capable of meeting problems of causation head on and resolving them in a clear, rational and consistent manner.²

The framers of the Indian Penal Code did consider prescribing general rules on causation but eventually decided that the infinite variety of cases made it "a matter to be considered by the tribunals when estimating the

* Senior lecturer in law, University of Sydney, Australia. This paper formed the substance of a lecture at the Law Faculty, University of Delhi in November 1991.

1. The offence of murder, which is a species of culpable homicide, is spelt out in s.300 of the *Indian Penal Code*.

2. As one distinguished commentator has asserted, "it is a confession of failure on the part of the lawyer if he is unable to give guidance on the operation of a legal rule of great importance": Professor G. Williams, "Causation in Homicide" (1957) *Criminal Law Review* 429 at 438.

effect of the evidence in a particular case, not by the legislature in framing the general law".³ This passing of responsibility to the courts was clearly with the expectation that, gradually, a body of case law would develop which would provide guiding general principles, as opposed to specific and rigid rules, to determine problems of causation. Regrettably, except for a handful of cases, this appears not to have been forthcoming, with the Indian courts mostly retreating into *ad hoc* judgments and avoiding the conceptual issues underlying causation which need to be tackled for general principles to be devised.

This article attempts to extract the general principles governing criminal responsibility for causing of death of a human being. In this exercise, Indian decision will be considered wherever possible, but given their small number, resort will be made to decisions from other jurisdictions, particularly to English and Australian cases. Reliance on these foreign decisions is permissible due to the universal nature of causation. As one writer has put it:

"Since in all forms of human society the recipient of the stimuli with which criminal law operates (to prevent crime) is the human psychestimulable by pains and pleasures or the expectation of either, and intent upon guiding its master's purposes would it not follow that cause-and-effect attribution, as a means for the proper application of the stimulus, must be the same all over the world?"⁴

This assertion fully accords with the thinking of the Code framers who intended the Indian Penal Code to be based on a "universal science of jurisprudence."⁵

As for textwriters, there is regrettably sparse analysis on causation to be found in the Indian commentaries on the criminal law, these being mostly taken up with a series of extracts from judgments with little more. This is perhaps understandable in view of the poor lead given by the courts themselves. The universality of the issue of causation does, however, permit us to refer to the writings of commentators from other jurisdictions.

Before we can extract any general principle governing causation, the purpose of the causal requirement must be properly appreciated. What does the law seek to achieve by requiring proof that D caused V's death? Part I of this article deals with this question. Part II proceeds to present the general principles of causation in the form of tests which determine whether causal responsibility has been established. In Parts III and IV,

3. Note M accompanying the first draft of the *Indian Penal Code* (1837), p. 141.

4. G. Mueller, "Causing Criminal Harm" in *Essays in Criminal Science* (G. Mueller, ed., 1961), p. 174. Earlier on, the writer contends that the criminal law serves the one grand purpose of crime prevention.

5. Prefatory address accompanying the first draft of the *Indian Penal Code* (1837), p. viii.

these tests are applied to a series of difficult cases to assess their utility in resolving problems of causation. By way of conclusion, the proposal is made for a general principle of causation to be embodied in the Indian Penal Code.

I. THE PURPOSE OF THE CAUSAL ENQUIRY

Shortly stated, the purpose of establishing causation is to ensure that only those who are found criminally responsible for the death of a victim may be punished for such a serious consequence. Thus, the causal enquiry is bound up with the overall enterprise of the courts of determining blame or innocence for criminally prescribed harm. The courts have developed a two-step enquiry to assist with this determination. The first step considers whether the accused's conduct contributed at all to the death, that is, whether there was any physical or factual connection between D's conduct and V's death. Obviously, should such a connection be wanting, the enquiry is "at an end" and the accused is acquitted. If a connection was present, the enquiry moves to the second step which considers whether the connection was sufficiently strong to justify imposing criminal responsibility. In line with their respective functions, the first step may be described as factual causation and the second step as imputable causation. Throughout this causal enquiry, the primary focus is on causation by human agency, specifically, D's conduct. This accords with the phrase, "whoever causes death" appearing in the relevant sections of the Indian Penal Code.⁶ The courts are therefore not concerned with physical forces or conditions except (as we shall later see) when they might be said to displace human causal responsibility.

With regard to factual causation, the enquiry does allow for V's death to be the result of a combination of causes.⁷ So long as D's conduct was necessary to the production of death, factual causation is established against him. It should also be noted that no quantitative exercise is conducted at this level of enquiry. This is because when, say, two causes were necessary to produce death, it is impossible to state scientifically which cause contributed the more. Certainly, the law does endeavour to ascertain whether one cause was more significant than another, but this is done in the second stage of imputable causation and not at the initial stage of factual causation.⁸ At the level of imputable causation, the enquiry goes beyond a purely factual determination to one involving a moral judgment. In the words of

6. Sections 299, 300 and 304A. See *Rajiv's Commentaries on the Indian Penal Code* Vol. II (3rd ed., 1973), p. 971. Of course, this does not exclude cases where a natural event constituted an intervening cause; see Part IV of this article.

7. For example, see s. 299 illustration (1) where death occurred due to a combination of actions by A (the accused) and Z (the victim) and illustration (2) where death was due to the combined actions of A and B (a third party).

8. G. Williams, "Causation in Homicide" (1957) *Criminal Law Review* 429 at 431-432.

the American Law Institute's Model Penal Code, the death must be "not too remote and accidental in its occurrence to have a just bearing on the actor's liability or on the gravity of his offence."⁹ The word "just" indicates that a moral reaction is called for in terms of whether V's death can in fairness be attributed to D. Hence, not all factual causes will be ascribed with criminal responsibility; only those which attract moral blame will be so ascribed. This assertion has been challenged by some commentators who argue that the causal enquiry should be confined to factual causation, with moral blame being assessed under the fault element of the offence, namely, whether D intended, knew, was rash or negligent (as the case may be) in contributing to V's death. For example, in *Kenny's Outlines of Criminal Law*, Professor Turner says:

"It is...reasonable to say that an event is caused by one of (the factually necessary causes) if it would not have happened without that factor... Under the modern conception of mens rea no hardship can result from any fine drawn investigation of causes, since the more remote the cause the greater the difficulty of proving that the accused person intended or realised what the effect of it would be."¹⁰

According to Turner, D is criminally responsible for V's death if a factual connection between his conduct and the death was established and he was found to have the mental state required for the offence.¹¹ However, this contention fails to properly reflect the complexity of the law on causation.¹² Consider the case of D who strikes V intending to kill him. V is killed while in hospital when a nurse intentionally administers poison to him. Under Turner's doctrine, D is liable for murder when this is not the law.¹³ Something more elaborate than a simple combination of factual causation and mens rea is therefore required to establish causal responsibility in the criminal law. The second step enquiry of imputable causation meets this need.

9. *Official Draft and Revised Comments* (1985), s. 2.03(2)(b).

10. (16th ed., 1952), pp. 20-21. Cf. the following comment by the Code framers in the prefatory address accompanying the 1837 draft of the *Indian Penal Code* at 141-142:

"It will require strong evidence to prove that an act of a kind which very seldom causes death, or an act which has caused death very remotely has actually caused death in a particular case. It will require still stronger evidence to prove that such an act was contemplated by the person who did it as likely to cause death, but if it be proved by satisfactory evidence that death has been so caused, and has been caused voluntarily, we see no reason for exempting the person who caused it from the punishment of voluntary culpable homicide."

11. See also *Manjore-Khang v. R.* (1964) 111 C.L.R. 62 at 67-68 per Taylor and Owen JJ (High Court of Australia).

12. See H.L.A. Hart and T. Honore, *Causation in the Law* (2nd ed., 1985), pp. 390-391.

13. Turner's reference to mens rea is also problematic in respect of the offence of causing death by negligence under s. 304A of the *Indian Penal Code* since a subjective mental state is not an essential element of that offence.

Our discussion of Purner's contention raises a related point, namely, whether the enquiry into imputable causation should be devoid of any consideration of mental processes. It may be argued that these processes should be confined solely to the mens rea aspects of the offence.¹⁴ It is contended that imputable causation can and does involve mental processes, at least under the rubric of such concepts as foresight and estimates or probabilities of risk. The function of imputable causation in determining moral blame is surely facilitated by an enquiry into what an ordinary person in D's position could reasonably have anticipated to be the consequence of certain of her or his conduct. Moral blame is readily attached to D if the enquiry finds that an ordinary person could reasonably have foreseen V's death as a likely consequence of such conduct. This, of course, is not to say that these mental processes embodied in the causal enquiry serve to replace the usual mens rea requirements of the offence.¹⁵ The mens rea element remains as essential part of the offence requiring proof, with the mental processes contained in the enquiry into imputable causation performing a separate function. That said, both the requirements of mens rea and imputable causation constitute parts of the same overall objective of determining criminal responsibility in a given case.

By way of summary of this Part, reference may be made to the case of *Naga Ba Min v. Emperor*, a decision of the Rangoon High Court.¹⁶ D had delivered several blows with a stick on V's head. The wounds were not of a serious nature and under ordinary circumstances, V would have fully recovered within a fortnight. After being treated in hospital, V was discharged and returned to her village. As a result unskilful treatment she received in the village and her own failure to keep the injuries clean, V died from an abscess forming in the brain as a result of the wounds becoming septic. The High Court ruled that D had not caused V's death. Dunkley J., delivering the judgment of the court, said:

"The learned Magistrate who tried the case has rightly held that the appellant cannot in any case be held responsible for causing V's death. Her death was due to her own ignorance and the unskilful treatment which she received in her village, and the injuries on her head were only the remote cause of death. In order that a person should be guilty of culpable homicide it is indispensable that the death of deceased should be connected with the act of violence or other primary

14. Indeed, this seems to be the orthodox view, with causation assigned to the actus reus or physical elements of an offence, and all mental processes assigned to the mens rea element: see *Howard's Criminal Law* (5th ed., 1990), p. 35; P. Gillies, *Criminal Law* (2nd ed., 1990), pp. 32-33.

15. G. Mueller, "Causing Criminal Harm" in *Essays in Criminal Science* (G. Mueller ed., 1961), pp. 178, 184-185; M. Marcus "Kills v. Causes Death" (1979) 85 *Cr. L.J.* 57 at 59-60. Contra, *Public Prosecutor v. Suryanarayanaoorthy* (1912) M.W.N. 136 at 142-143 per Sundara Aiyar J. (dissenting).

16. A.I.R. 1915 Rang. 418. The *Indian Penal Code* was then part of the law of Burma.

cause, not merely by a chain of causes and effect, but by such direct influence as is *calculated* to produce the effect without the intervention of any considerable change of circumstances."¹⁷

Some of the assertions contained in this passage require detailed discussion and will be considered in the succeeding Parts of this article. For now attention may be drawn to the judge's application of the two-step causal enquiry. First, as regards factual causation, his Honour acknowledged that a prima facie case of causation had been established since the injuries inflicted by D constituted a factual cause of V's death (albeit his description of them as "the remote cause of death"). In this regard, his Honour attributed the factual cause of V's death to a combination of causes including the injuries inflicted by D, V's own lack of care, and improper treatment. Moving on to the enquiry into imputable causation, Dunkley J.'s use of the phrase "be held responsible" is noteworthy because it reveals that he saw this aspect of the causal issue as involving not merely a purely factual enquiry but one requiring a moral judgment of the court. His Honour held that, on the facts, the injuries inflicted by D were not "a primary cause" of V's death as they were not of "such direct influence as is calculated to produce" the death. The notion of "primary cause" connotes a substantial connection between D's action and V's death while the word "calculated" implies a mental process linking D's conduct with V's death. In the next Part, these notions will be shown to be the two tests for establishing imputable causation as devised by the courts, namely, the substantial factor test and the foresight test respectively.

II. THE TESTS FOR FACTUAL AND IMPUTABLE CAUSATION

With an understanding of the purposes of the causal enquiry, we are now in a position to present the test for factual causation followed by those for imputable causation. We are also able to critically evaluate the ability of these various tests to meet the purposes of the causal enquiry.

(1) The test for factual causation

The test for establishing factual causation is a straightforward one with little controversy. If V's death would not have occurred without D's conduct, there is factual causation. This is sometimes described as the "but-for" test, the question being whether V would not have died but for D's conduct. Traditionally, D's conduct would be termed a *sine qua non* (a necessary or indispensable condition) of V's death. Conversely, if V's death would have occurred whatever D did or did not do, factual causation is not established and the causal enquiry is at an end.

Death being inevitable, conduct which factually causes V's death merely accelerates its arrival. To D's argument that V would eventually have

17. *Ibid.*, at 419. Emphasis added for the purpose of elucidation.

died anyway comes the reply that V would not have died on that particular occasion but for D's conduct. A specific instance is covered by Explanation 1 to s. 299 of the Indian Penal Code which states:

"A person who causes bodily injury to another who is labouring under a disorder, disease or infirmity, and thereby accelerates the death of that other, shall be deemed to have caused his death."

Under this Explanation, D cannot deny having factually caused V's death by saying that V's pre-existing illness or injury would have killed him eventually. To take an extreme example, D's administering a fatal dose of poison to V thereby killing him instantly would be conditions sine qua non of V's death even though V would have in any event died a minute later from an ailing heart.¹⁸ A more common example would be for D's conduct to have worked in combination with V's pre-existing weakened condition to cause his death earlier than when it would otherwise have occurred. In such a case, both D's conduct and V's weakened state would be sine qua non of V's death. As far as D's conduct alone is concerned, V would not have died at the precise moment when he did but for such conduct.

The same response may be given to unusual cases where D's conduct prolongs V's life rather than accelerates his death.¹⁹ For example, D stabs V so that V is too ill to travel on a plane and V dies of the stab wound the day after the plane crashes with all aboard. D's act of stabbing would still be a sine qua non of V's death given that the enquiry is whether V's death would not have occurred when it did but for D's conduct.

There is an instance when the "but for" test appears inadequate. This may be described as a case of multiple sufficient causation as where A and B both simultaneously and independently inflict fatal wounds on V. For example, A might have shot V through the heart at the same moment when B blew V's brains out. In such a case, it would be inaccurate to assert that V would not have died but for A's act since V would have died as a result of B's act, and the converse applies as well. However, the prevailing view seems to be that both actors have factually caused V's death.²⁰

(2) The test for imputable causation

As may be expected, the greatest problems in causation are in the realm of imputable causation with its enquiry into moral blame and responsibility. Due to the importance and complexity of the issue, the law ought to provide general guidelines or tests to enable cases be dealt with in a just and consistent fashion. Several efforts have been made by the Indian courts

18. Hence this aspect of causation provides no defence to acts of euthanasia or mercy-killing.

19. See E. Colvin, "Causation in Criminal Law" (1989) 1 *Bond Law Review* 253 at 255.

20. J.C. Smith and B. Hogan, *Criminal Law* (6th ed., 1988), p. 314; E. Colvin, "Causation in Criminal Law" (1989) 1 *Bond Law Review* 253 at 255-256.

to devise appropriate tests for imputable causation, a prime example being the following comment dealing with causing death under s. 304A of the Indian Penal Code:-

"To impose criminal liability under s. 304A of the Indian Penal Code, it is necessary that the death should have been the direct result of a rash and negligent act of the accused, and that act must be the proximate and efficient cause without the intervention of another negligence. It must be the causa causans; it is not enough that it may have been the causa sine qua non."²¹

Dealing with the tests of "direct result" and "proximate cause" together, these are misleading since there may be several stages between the so-called direct or proximate cause and V's death. Suppose D sends poisoned sweets to V who lives a great distance away and V dies upon consuming them. The law would hold D causally responsible for V's death even though his act of posting the sweets and V's eventual death were separated considerably by space and time.²² As for the test of "efficient cause", this is unhelpful since every cause must by definition be effective—an act which is not effective in producing a result cannot be described as a cause of it. The final test in the above passage distinguishes factual causation from imputable causation by describing the former as a causa sine qua non and the latter as the causa causans. While the distinction between factual and imputable causation is laudable, the notion of causa causans is far too generous towards D in requiring his conduct to have been the immediate cause.²³ As we shall see, the courts have attributed causal responsibility to D even when some other cause came between his conduct and V's death. Are there then any viable tests for imputable causation? There appear to be two such tests, what may be described as the substantial factor test and the foresight test. To the first we now turn.

*The substantial factor test:*²⁴ The best known example of this test is contained in the English Court of Appeal case of *R. V. Smith*.^{24a} D had stabbed V who was then rushed to hospital. On the way, V was dropped twice and at the hospital he was given improper treatment which could have affected his chances of recovery. It was held that imputable causation was to be determined by whether the original wound inflicted by D on V was

21. *Emperor v. Onkar Rampratap* 4 Bom. L.R. 679 at 682 per Lawrence Jenkins J. and cited with approval by the Indian Supreme Court in *Rangswalia v. State of Maharashtra* A.L.R. 1965 Supreme Court 1616 and in *Mulani v. State of Maharashtra* A.L.R. 1968 Supreme Court 829. See also the Supreme Court case of *Sunderian Kumar v. State of Delhi* (1975) 3 S.C.C. 831 which spoke of a "direct cause" of death in case of murder.

22. G. Williams, *Textbook of Criminal Law* (2nd ed., 1983), p. 381.

23. Cf. the expression "causa causans" which denotes a proximate but not an immediate cause. The distinction appears in *Moss v. Culliffe* 2 Retie 662 (1875).

24. Sometimes described as the substantial cause test or substantial connection test. *24A. R. V. Smith* (1959) 2 QB 35.

"still an operating cause and a substantial cause" of V's death. Many Australian courts have adopted this test, the most precise statement being made by the South Australian Court of Criminal Appeal in *Hallett v. R.*:

"The question to be asked is whether an act or a series of acts (in exceptional cases an omission or series of omissions) consciously performed by the accused is or are so connected with the event that it or they must be regarded as having a sufficiently substantial causal effect which subsisted up to the happening of the event, without being spent or without being in the eyes of the law sufficiently interrupted by some other act or event."²⁵

This test seems of late to have been watered down by some case authorities to a requirement that D's conduct must simply have been more than a purely trivial cause of V's death, that is, a de minimis contribution.²⁶ Instances of this may also be found in Indian decision. In the Punjab High Court case of *Emperor v. Gul Shah*, four persons joined in beating V.²⁷ Two of them inflicted fatal blows on V's head after which the other two, ignorant of the mortal injuries already inflicted by their comrades, struck slight blows on V's body. The court held that these slight blows were insufficient to cause V's death. In *In re, Munsami*, D had throttled V to the extent of breaking V's hyoid bone.²⁸ Nevertheless, V had survived for another 24 hours and was able to talk and eat during that time. In the light of medical expert opinion, the Madras High Court doubted whether V had died of asphyxia through throttling. The court effectively held that even if the throttling might have been a sine qua non of V's death, it was too trivial a cause to render D causally responsible for the death.

The substantial factor test does constitute a useful general guide for determining whether D's conduct should attract moral blame. D's conduct would have to sufficiently contribute to V's death before causal responsibility will be imputed to D. Below a minimum level of contribution, D's conduct would be too insignificant to warrant exposing him to liability for V's death. The test is clearly wide enough to account for the infinite variety of homicide cases where causation is an issue. Accordingly, the test minimizes the danger of forcing results which might be regarded as overly harsh or unduly lenient according to popular perceptions about moral blame for the occurrence of results.²⁹

25. (1969) S.A.S.R. 141 at 149.

26. For example, see *R. v. Hemmigan* (1971) 3 All E.R. 133 at 135 per Lord Parker C.J.;

R. v. Cato (1976) 1 All E.R. 260 at 265-266; *Smithers v. R.* (1977) 34 C.C.C. (2d) 427 at 433; *R. v. Malcherek* (1981) 2 All E.R. 422 at 428; *R. v. Aminath* (1987) 37 A.

Crim. R. 131 at 148-149.

27. *Emperor v. Gul Shah* (1914) 25 I.C. 1005.

28. *In re, Munsami* 1971 Cri. L.J. 957.

29. D. Kart, "Causation in the Model Penal Code" (1978) 78 *Columbia Law Review* 1249 at 1265-1266.

However, the test has several drawbacks. First, it is retrospective in nature involving looking backwards from V's death to determine whether D's conduct was a sufficiently substantial contribution to the death. Such an enquiry fails to account for the mental processes which could reasonably have been experienced by an ordinary person in D's position concerning the likely consequences of her or his action on V. To cater for this perspective, the test would have to be prospective in nature, looking forward from the conduct towards the result. The relevance of such mental processes to the determination of moral blame has been noted in Part I.³⁰ This lack in the substantial factor test means that it will not be as keen a test as one which features these mental processes. Another drawback of the test is its inability to provide clear and rational guidance in cases involving intervening causes.³¹ Suppose that D injures V who dies not solely from the injury but through the intervention of V's own act, a third party's act or an event of nature. V might have refused medical treatment which was readily available and would certainly have saved her life; or a doctor might have operated unsuccessfully on V killing her in the process; or an earthquake may have buried V alive as he lay where D had left him. Other than a call for intuition to apply, the substantial factor test is not sufficiently sensitive to assist in deciding whether D's conduct remained a substantial cause of V's death or whether it had been overwhelmed by the later intervening cause. Thus we find in the pronouncement of the test in *Hallett*, cited earlier, the meagre comment that D's conduct had to have "a sufficiently substantial causal effect which subsisted up to the happening of [V's death]...without being in the eyes of the law sufficiently interrupted by some other act or event."³² The statement does not explain how a court is to decide whether "in the eyes of the law" an intervening cause has overridden the injury inflicted by D. There is, however, another test of imputable causation which does not suffer from these drawbacks, namely, the foresight test.

The foresight test: This test has received far less recognition in England and Australia than the substantial factor test. By contrast, more Indian courts seem to have subscribed to this test than the substantial factor test, although there is still very much further to go in its refinement and use in India.³³ The test requires the court to consider the following question: when D acted in the way he did did he actually foresee or could he have reasonably foreseen V's death as a likely consequence of such conduct? Hence, the test is prospective in nature, looking forward from D's position at the time when he acted to the consequence of his action. Furthermore, as its name suggests, the foresight test takes stock of the mental processes

30. See above, 4.

31. This is sometimes described as the doctrine of *novus actus interveniens*.

32. (1969) S.A.S.R. 141 at 149 and fully reproduced in the main text accompanying note 25 above.

33. Several of these Indian decisions will be discussed in Parts III and IV of this article.

linking D's conduct with the result, such processes being either subjective (D's actual foresight) or objective (an ordinary person's reasonable foresight) as the case may be.

The case of *Yohanam v. State of Kerala* contains a good example of the foresight test under Indian law.³⁴ D had stabbed his wife in the back with a penknife which injured her spinal cord resulting in paralysis of her lower limbs and of the bladder. She died seven months later after being bed-ridden throughout and developing cystitis and bedsores. In finding D's act of stabbing to have been an imputable cause of V's death, the court said:—

"There is no indication of any unexpected intervention, and as observed by Mayne at p. 469 of his *Criminal Law of India*, 4th edition, 'any act is said to cause death within the meaning of s. 299, when the death results either from the act itself or from some consequences necessarily or naturally flowing from that act, and reasonably contemplated as its result.'³⁵

This statement has been cited with apparent approval by several leading Indian commentaries.³⁶ The words "reasonably contemplated" is clearly another way of saying that the result was reasonably foreseeable. As for the phrase "consequences necessarily or naturally flowing from" D's act, reference may be made to the following comment by the Privy Council in the celebrated case of *The Wagon Mound*:—

"If it is asked why a man should be responsible for the natural or necessary or probable consequences of his act (or a similar description of them) the answer is that it is not because they are natural or necessary or probable, but because, since they have this quality, it is judged by the standard of the reasonable man that he ought to have foreseen them."³⁷

While this is a civil case involving the tort of negligence, nevertheless the pronouncement on the foresight test is equally applicable to the causal enquiry under criminal law.³⁸

It is to be observed that the foresight test embodies the quality of reasonableness. Several features of the test may be gathered from this. First, the quality of reasonableness turns the test into a practical enquiry. The

34. A.I.R. 1958 Kerala 207.

35. *Ibid.*, at 210 per Raman Nayar J.

36. For example, *Gow's Penal Law of India*, Vol. III (10th ed., 1983), pp. 2222-2223; *Nelson's Indian Penal Code*, Vol. II (7th ed., 1983) p. 980; *Koite's Commentaries on the Indian Penal Code*, Vol. II (3rd ed., 1973), p. 974.

37. *Overseas Tankship (U.K.) Ltd. v. Morts Dock and Engineering Co. Ltd. (The Wagon Mound)* (1961) A.C. 388 at 423 per Viscount Simonds.

38. See *R.v. Knutsen* (1963) Qd. R. 157 at 173.

foreseeability of harm is not to be considered in isolation but in the context of all the circumstances prevailing at the time which an ordinary person would have taken into account. As Professors Hart and Honore put it: "Reasonable foresight, in relation to culpability, is therefore a practical notion and we may term the harm, the risk of which is sufficient to influence the conduct of a prudent man, 'foreseeable in the practical sense'".³⁹ Next, by conjoining "reasonable" with "foresight", the test means to delineate between normal and abnormal consequences with D being made causally responsible for only normal consequences. In other words, the notion of reasonable foresight enables the court to exempt D in a case where his conduct led to an unusual or unpredictable result.⁴⁰ In much the same way, the test distinguishes the intervening acts of responsible actors from those of non-responsible ones. By responsible actor is meant a person who acts independently and freely with full knowledge of the risks involved in his actions.⁴¹ Conversely, a non-responsible actor is a person who may be ignorant of the risks involved or may be aware of such risks but performs the action under pressure from some source. The reasonable foresight test tends⁴² to attribute causal responsibility where a non-responsible actor is involved and not in the case of a responsible actor. An explanation for this is that the actions of a non-responsible actor are more reasonably foreseeable since they stem from the constraints of ignorance or pressure. On the other hand, the actions of a responsible actor are far less predictable given their free and independent character.⁴³ Thirdly, reasonableness denotes that the test is meant to be broad and flexible in application, as opposed to being a narrow and rigid test. Thus, the test is concerned with the foreseeability of the consequence (such as V's death) and not with the foreseeability of the manner of its occurrence. In the same vein, the test would accept as a foreseeable consequence any one of an infinite number of possible consequences so long as it was the kind of outcome which would not cause surprise.⁴⁴

Each of the above aspects of the test lend themselves to the determination of whether, in a given case, it is morally just or fair to impute causal responsibility to D for V's death. In sum, D is made causally responsible

39. H.L.A. Hart and T. Honore, *Causation in the Law* (2nd ed., 1985), p. 263.

40. G. Williams, *Textbook of Criminal Law* (2nd ed., 1983), p. 388.

41. This concept is adapted from H.L.A. Hart and T. Honore *Causation in the Law* (2nd ed., 1985), pp. 326-338; and G. Williams, *Textbook of Criminal Law* (2nd ed., 1983), pp. 393-396.

42. This word is used deliberately here to denote that this aspect of the foresight test does not always operate in the way suggested in the discussion. This will be borne out in various cases considered in Parts III and IV.

43. Professor G. Williams offers another explanation for holding that the actions of a responsible actor severs the causal connection between D's conduct and the eventual harm. What such an actor does should be regarded as his own responsibility and not as having been caused by other people. *Textbook of Criminal Law* (2nd ed., 1983), p. 391.

44. Williams, *ibid.*, p. 389.

for those normal or predictable consequences of his conduct as assessed in a practical and general way. As we shall see in Parts III and IV, these qualities make the foresight test much more effective than the substantial factor test in resolving difficult problems involving intervening causes. Part III covers a selection of cases where V in some way contributed to causing her own death, while Part IV includes cases where a third party or natural event contributed to the death. In each case the question for determination is whether D, who had caused the original injury to V, should be imputed with causal responsibility for V's death.

III. WHERE THE VICTIM CONTRIBUTED TO HER OWN DEATH

Unlike in the law of torts, V's contributory negligence in causing her own death is immaterial as a defence in criminal law. However V's contributory negligence could in certain circumstances break the causal connection between D's conduct and V's death. Besides being negligent, V might have contributed to her own death by having a special sensitivity which rendered her more prone to death than usual. We shall consider four cases where V contributed to her own death:

- (1) where V was ignorant of the danger created by D when she took the action causing her own death;
- (2) where V knew of the danger created by D but took the action causing her own death under pressure from D;
- (3) where V knew of the danger created by D and freely or voluntarily took the action causing her own death;
- (4) where V dies from the danger created by D due to a special of unusual sensitivity she suffers from.

(1) *V's ignorance in causing her own death*: The Madras High Court case of *Public Prosecutor v. Suryanarayanaiah* provides an example of such an occurrence.⁴⁵ D met N in a house and gave some poisoned sweetmeat to N with the intention of killing him. Not liking its taste, N threw the remainder of the sweetmeat on the spot. V, a 9 year old child who lived in the house where the meeting occurred, retrieved the sweetmeat, ate it and died of the effects of the poison. The court held D causally responsible for V's death by relying on the following illustration:

"For instance, if A mixes poison in the food of B, with the intention of killing B, and B eats the food and is killed thereby, A would be guilty of murder, even though the eating of the poisoned food, which was a voluntary act of B, intervened between the act of A and B's death. So, here the throwing aside of the sweetmeat by [N] and the picking and the eating of it by [V] cannot absolve the accused from responsibility for his act."⁴⁶

45. (1912) M.W.N. 136.

46. *Ibid.* at 149.

The court then explored several other hypothetical cases to illustrate the point that the issue of causation very much depends on the particular facts. One such was as follows:

"[S]uppose N, either suspecting that the sweetmeat was poisoned or merely thinking that it was not fit to be eaten, threw it away in some unfrequented place so as to put it out of harm's way and [V] happening afterwards to pass that way picked it up and ate it and was killed, the act of the accused in mixing the poison in the sweetmeat could in that case hardly be said to have caused her death."⁴⁷

The conclusions reached by the court in respect of these various fact situations are intuitively correct. But more than mere intuition is required if the important issue of imputable causation is to be justly and consistently worked out by the courts. This is where the tests for imputable causation come into play. Dealing first with the case where B partook of the food which A had poisoned, the substantial factor test would conclude that A's act of poisoning the food significantly contributed to B's death and, accordingly, A is causally responsible for the death. Applying the foresight test, the same conclusion is reached but via a different route. A would be held either to have actually or reasonably foreseen that B might die as a consequence of his action. B's death by poisoning would, in the circumstances, be regarded as a normal outcome of A's conduct. Furthermore A's awareness that B was ignorant of his food being poisoned, would add his reasonable expectation that B would eat it. The two tests apply in the same way to the actual facts in *Suryanarayanaiah*. D's poisoning of the sweetmeat would be regarded as a substantial contribution to V's death, and the death would be a reasonably foreseeable result of D's action given that he had applied it to an appetising sweetmeat and that V was a child living in the house where D had given the sweetmeat to N.

We consider next the case of N who has thrown the sweetmeat in an unfrequented place which is chanced upon by V who eats it and dies.⁴⁸ Invoking the substantial factor test, it is by no means certain whether D's poisoning of the sweetmeat still constitutes a significant contribution to V's death. The only fact supporting the conclusion that D's conduct was no longer a substantial causal factor is N's action of throwing the sweetmeat away in an unfrequented spot. But the test fails to articulate precisely the reason why N's conduct should be regarded as so substantial as to overcome the causal contribution by D. By contrast, the foresight test provides a ready explanation by noting that D could not have reasonably foreseen that V might find the sweetmeat in the unfrequented place.⁴⁹ V's act of finding

47. *Ibid.* at 150.

48. Such a case has been described as involving "an unexpected twist": see G. Williams, *Textbook of Criminal Law* (2nd ed., 1983), pp. 386-387.

49. Of course, D might reasonably have foreseen that N might reject the sweetmeat

and eating the sweetmeat would, in the particular circumstances, be an abnormal or unexpected occurrence which D should not be made causally responsible for.⁵⁰ Thus we find the foresight test possessing a sharper capacity than the substantial factor test for analysing and arriving at a morally just result.

(2) *V under pressure to take action causing her own death*: There is a cluster of cases from various jurisdictions, including India, in which V dies as a result of taking steps to escape from an vicious attack by D.⁵¹ For instance, V may have jumped from a high spot, or from a fast-moving vehicle and died on impact with the ground. The principal ruling from these cases is succinctly stated in *Halsbury's Laws of England*:-

"Where a person attacks or threatens to attack another and compels the person attacked by bodily force, or induces him by a well-grounded apprehension of immediate serious violence, to do some act which directly results in his death, the person attacking or threatening to attack is guilty of murder."⁵²

The joint which attaches causal responsibility on D for V's death is clearly because V's act was motivated by a "well-grounded apprehension of immediate serious violence" from D. This is really an inelegant way of expressing the foresight test since the focus is on the reasonableness of V's apprehension of violence when it should properly be on D's reasonable anticipation of V's efforts to escape.

The right focus was made by the Mysore High Court in the case of *Bastappa v. State of Mysore*.⁵³ V had jumped from the roof of a house after the two accused inflicted axe wounds on him. The court was prepared to hold the accused causally responsible for V's death even assuming that V had died from the fall rather than the axe-wounds. The court's basis for this holding was that the "deceased jumped from the roof as a direct result of the cuts given to him. It was a normal and necessary consequence of the

and dispose of it in a particular way. But this involves a separate question concerning the acts of third parties which will be discussed in Part IV.

50. The fact that V was a non-responsible actor in that she was ignorant of the poison in the sweetmeat does not make it any more foreseeable that she might find it in the unfrequented spot. Here then is an instance when the difference between the conduct of a responsible actor and that of a non-responsible actor is of no consequence. Cf. see Part IV for N as a responsible or non-responsible intervener.

51. For example, see *R. v. Pitts* (1842) C. & M. 248, 174 E.R. 509; *R. v. Grimes* (1894) 15 L.R. (N.S.W.) 209; *R. v. Hickman* (1831) 5 C. & P. 151, 172 E.R. 917; *R. v. Halliday* (1889) 61 L.T. 701; *R. v. Martin* (1882) Q.B.D.; *R. v. Curley* (1909) 2 Cr. App. R. 109; *Bastappa v. State of Mysore* AIR 1960 Mysore 228; *R. v. Roberts* (1971) 56 Cr. App. R. 95; *R. v. Mackie* (1973) 57 Cr. App. R. 453; *Joginder Singh v. State of Punjab* 1979 Cri. L.J. 1406; *D.P.P. v. Daley* [1980] A.C. 237; *R. v. Royall* (1989) 41 A. Crim. R. 447.

52. Vol. 13 (3rd ed.) p. 572.

53. AIR 1960 Mysore 230.

acts of the appellants."⁵⁴ Applying the pronouncement in *The Wagon Mound* cited earlier, since V's jumping to his death was a natural, necessary or probable consequence of D's conduct, D ought to have reasonably foreseen it.⁵⁵ The proper focus on D's foresight rather than V's conduct also appears in *Rajiv's Commentaries on the Indian Penal Code* where, immediately following the citation of the earlier mentioned passage from *Halsbury*, the learned commentator felt the need to add the rider that "the act which resulted in death must be the natural consequence of the acts or conduct of the prisoner."⁵⁶

The clearest statement of the foresight test in this cluster of cases is, however, to be found in the English Court of Appeal decision in *R. v. Roberts*.⁵⁷ D was driving V from a party when he made sexual advances towards her and said that he had beaten up girls who had refused him. V jumped out of the moving car and was injured. The court held that D had caused her injury stating that:

"The test is: Was [the injury] the natural result of what the alleged assailant said and did in the sense that it was something that could reasonably have been foreseen as the consequence of what he was saying or doing?"⁵⁸

Due to the quality of reasonableness embodied in the foresight test D will be held liable for V's harmful action to herself so long it fell within a range of possible actions which would not have surprised an ordinary person in D's position. This, in the English case of *R. v. Pitts*, V had drowned when he slipped into a river in an endeavour to escape from D's murderous assault.⁵⁹ The court instructed to jury to regard D as having caused V's death if they were satisfied, not that B's method of escape was the only means open to him, but that it was such a method as a reasonable person might take. This may be contrasted with the Indian Supreme Court decision in *Joginder Singh and other v. State of Punjab*.⁶⁰ V had jumped into a well in order to escape from the close pursuit of the two appellants who were intent on assaulting him. V's head hit a hard substance in the well and drowned. The court

54. *Ibid.* at 229.

55. The full pronouncement appears in the main text accompanying note 37 above.

56. Vol. II (3rd ed., 1973), p. 976.

57. (1971) 56 Cr. App. R. 95.

58. *Ibid.* at 102 per Stephenson, L.J. See also the New South Wales case of *R. v. Annakin* (1987) 37 A. Crim. R. 131 at 148, where the following direction was upheld on appeal: "When there is some intervening factor, that is something which happened between the act of the accused and the death, such as jumping out of the window (to escape D's assault)...the question is whether that intervening factor, as it is called, is something which could have reasonably been foreseen, and which might accordingly be regarded as a natural consequence of the accused's act."

59. (1842) C. & M. 284, 174 E.R. 509.

60. 1979 Cri. L.J. 1406.

acquitted the appellants of the murder charges even though it was conscious of the fact that what induced V's action was the circumstance that the appellants were following him closely. In its concluding remarks, the court said:

"If we were satisfied that [the appellants] drove [V] to jump into the well without the option of pursuing any other course, the result might have been different. As the evidence stands we are unable to hold that the death of [V] was caused by the doing of an act by [the appellants] with the intention or knowledge specified in s. 299, Indian Penal Code."⁶¹

It is submitted that, standing on its own, the first sentence in the above passage is too restrictive an application of the foresight test. However, as the second sentence reveals, it might well be that the Supreme Court was discussing the issue of mens rea rather than causation. When the sentence are read together, the court seems to be holding that it might have found the appellants having the intention or knowledge required under s. 299 if the facts showed that they had driven V to jump into the well fully aware that he had no other means of escape.

A slight variation of the type of cases we are discussing here may be briefly mentioned. In the Australian case of *R. v. Butcher*, D tried to rob V by presenting a knife towards V's stomach while standing a few feet from him.⁶² According to D's story, V had rushed at D and into the knife. The Victorian Full Court held D causally responsible for V's death, approving the following direction of the trial judge to the jury:

"The fact that the deceased moved forward... does not necessarily mean that the accused's act in holding out the knife was not the cause of the stabbing. The reaction of men to threats upon them are known to vary widely. The man who threatens his victim... must realise that the consequential reaction cannot be predicted with certainty. Some victims may retreat; some may advance... [I]t would be open to you to find that, as a matter of common sense, in the light of all the circumstances, the accused's act in holding out the knife caused the stabbing and, therefore the death, notwithstanding the fact that some movement of the deceased contributed to it as one of the causes."⁶³

Several points of interest may be gathered from this direction. In *Butcher*, V's action which caused his own death was not for the purpose of escaping from his assailant but by way of self-defence. Nevertheless, the case shares in common with the flight cases the fact that V was operating

61. *Ibid.* at 1409 per Chinnappa Reddy J.

62. [1986] V.R. 43.

63. *Ibid.* at 55-56.

under pressure exerted by D. Also, the court was clearly applying the foresight test when inviting the jury to consider what a threatener might have realised were the possible consequential reactions of his victim to the threat. So long as the reaction of the victim was a kind which could reasonably have been contemplated by the threatener, he will be held causally responsible for the injury suffered by the victim. This is in line with our earlier discussion of *Pitts* and *Joginder Singh*.

The foresight test has been resorted to in all the above cases because it provides the courts with the best guide in determining whether D should be made criminally responsible for V's death when it was partly contributed by V's own action. The test emphasises the pressure which D had brought to bear on V thereby making V a non-responsible actor. Being so constrained, V's choice of action was that much more predictable. The test also involves a practical enquiry, requiring the courts to consider all the circumstances surrounding the conduct of D and V and to explore the range of possible reactions of V to D's conduct. Ultimately, D is made criminally responsible for V's death if it was a normal consequence of D's conduct. Conversely, no such responsibility would lie on D if the death was abnormal in the sense of being unexpected in the particular circumstances—in short, not reasonably foreseeable.

The substantial factor test is rudimentary by comparison in providing guidelines for resolving the causal issue in these types of cases. The test does not assist much by asserting that D's conduct could have remained a significant contribution to V's death despite the steps taken by V which led to her own death. This requires a weighing up of the contributing causes of D's conduct on the one hand and V's action on the other with the objective of determining whether the latter was so dominant as to have overwhelmed the former as a cause of death. The test, however, does not do much more than present this quantitative exercise, leaving the enquirer in the dark as to precisely how the exercise is to be performed.

(3) *V's voluntary contribution to her own death*: In this next set of cases, V's decision to take the action which leads to her death is entirely on her own accord and uninfluenced by D's conduct. V is therefore a responsible actor whose free and independent actions will generally be far less predictable than the Vs considered in the immediately preceding sub-section. Consequently, V's death would in many instances be regarded as abnormal from the viewpoint of an ordinary person in D's position. Applying the foresight test to these cases, we would expect more of the Ds here to escape criminal responsibility for V's death. Different results may however be reached for the same fact situation if the substantial factor test were applied instead. This is because the substantial factor test lacks the same capacity as the foresight test to consider factors which are significant in determining moral blame. This criticism of the substantial factor test will be borne out in the ensuing discussion.

There are several cases where V has been grossly wanting in caring for

her own safety after D's conduct has created a potentially dangerous situation. For example, in the New Zealand case of *R. v. Storey*, after a car collision for which D was responsible, V had deliberately driven across the road to reach and open space where, the soil being loose, resulted in V's death when his car fell down the bank.⁶⁴ The court held that D would not be imputed with causing V's death if two conditions were met, namely, (i) V had driven across the road voluntarily rather than being forced across it by the impact and (ii) if crossing the road was not the reasonable and natural action to take in the circumstances.⁶⁵ We see here the foresight test being applied with the first condition enquiring whether V was a responsible actor whose independent action was accordingly unpredictable; and with the second condition concerned with the normality or otherwise of V's action. A similar approach was taken in an American case, *Hubbard v. Commonwealth*, where D was resisting his arrest with some force when V, of his own accord, decided to assist in restraining him.⁶⁶ D did not strike V who died shortly afterwards from a heart failure accelerated by the physical exertion and excitement when participating in the arrest. V knew of his own heart condition and had complained of being ill a few hours before the incident.⁶⁷ The court held that his action of assisting with the arrest rather than lying quiet and still negated any causal connection which D's conduct may have had in creating the initial excitement. Again, the foresight test was evidently at work in this ruling with V regarded as a responsible actor whose action was abnormal or unforeseeable in the circumstances.⁶⁸

Then there are cases where V has been grossly wanting in caring for herself after D had physically injured her. A good example is the Rangoon High Court case of *Nga Moe v. The King*.⁶⁹ D had inflicted minor head injuries on V which had healed after a week in hospital. As V had a fever, he was advised by his doctor to remain in hospital until it had subsided. V discharged himself from hospital against his advice. He died a few weeks later from a brain abscess which had developed below one of the injuries inflicted by D. Medical evidence revealed that V suffered from chronic malaria which lowered his power of resistance and contributed to the formation of the abscess. It was also medically opined that had V remained

64. [1931] N.Z.L.R. 417.

65. *Ibid.* at 443, per Myers C.J.

66. (1947) 304 Ky. 818, 202 SW 2d 634.

67. Another way of analysing *Hubbard* is to regard V as having a special sensitivity which, unknown to D, increases the likelihood of death. In *Hubbard*, D was unaware of V's weak heart so that he could not have reasonably foreseen V's death.

68. Cases of special sensitivity are considered in greater detail in the next sub-section. For another case, see *R. v. Stripp* 1940 EDL 29, where D was acquitted of culpable homicide despite taking a bend in his car on the wrong side of the road and colliding into V, a cyclist. This was because V had at the last moment swerved into the path of D's car. The case is discussed in H.L.A. Hart and T. Honore, *Causation in the Law* (2nd ed., 1985), p. 350.

69. AIR 1941 Rangoon 141.

70. The role of such special sensitivity in the causal enquiry is fleetingly presented here and will be considered in detail in the next sub-section.

in the hospital as advised, the abscess would not have formed and he would have fully recovered. In acquitting D of the charge of murder, Roberts C.J. dealt with the facts in the following way:-

"It turns out here, though there is no evidence that the appellant knew at the time he struck the blow, that the deceased was in such bad health as to lower his power of resistance to a septic condition; and when, owing to his state of health, this supervened, he was unwilling to exercise common prudence or to abide by proper remedies and to seek treatment available to him. These circumstances, in my opinion, explain the cause of death, which was due to a number of factors of which the appellant's wrongful act was only one... [The appellant] cannot be said to have caused the death of the deceased... for he did nothing which was likely to cause it, or which would have done so except in conjunction with other circumstances which no reasonable man could foresee."⁷¹

The application of the foresight test is obvious in this passage. Notably, there is the stress made of V's decision as a responsible actor to leave the hospital against medical advice;⁷² and to D's ignorance of V's antecedent weakened condition. These factors led the court to conclude that D could not have reasonably foreseen that V might die from the injuries inflicted by him.

Another case which bears strong similarities with *Nga Moe* but where a different result was reached is the English Court of Appeal case of *R. v. Blaue*.⁷³ D stabbed V who, unknown to him, was a Jehovah Witness. She refused a blood transfusion on grounds of her religious beliefs despite being told that it was needed to save her life. The medical opinion was that V would have recovered had she permitted the transfusion. D argued that the causal chain between his stabbing V and her death had been broken by V's unreasonable refusal to have the transfusion, in effect, advocating the foresight test. The test would require the court to take account of V's refusal a decision to be made in the face of medical advice that the transfusion was essential to preserve life;⁷⁴ and the fact that the medical treatment needed to save her was readily available to V.⁷⁵ These factors would most probably

71. *Ibid.* at 144-145.

72. For other cases where V likewise discharged herself from hospital or further medical attention, see *Nga Ba Min* AIR 1935 Rangoon 418; *Ley v. R.* (1949) 51 W.A.L.R. 29; *R. v. Bingsore* (1975) 11 S.A.S.R. 469.

73. [1975] 3 All E.R. 446.

74. Contra, the argument by H.L.A. Hart and T. Honore in *Causation in the Law* (2nd ed., 1985), p. 361, that V was under pressure from her strong religious beliefs to refuse the transfusion.

75. See D. Galloway, "Causation in Criminal Law: Interventions, Thin Skulls and Lost Chances" (1989) 14 *Queen's Law Journal* 71 at 78.

76. Indeed, it appears that in *Blaue*, the court failed to take into account the great progress in medical science which had occurred after the ancient case authorities cited

have worked together towards the conclusion that D could not, in the circumstances, have reasonably foreseen V's death. However, the court emphatically rejected the foresight test in the following words:-

"It has long been the policy of the law that those who use violence on other people must take their victims as they find them. This in our judgment means the whole man, not just the physical man. It does not lie in the mouth of the assailant to say that this victim's religious beliefs which inhibited him from accepting certain kinds of treatment, were unreasonable."⁷⁷

Regrettably, the court did not consider how its pronouncement squared with its own decision in *Roberts*, the case involving V who had jumped from a moving car to escape D's sexual advances.⁷⁸ The court had there, it will be recalled, clearly subscribed to the foresight test. The court in *Blane* apparently applied the substantial factor test, noting simply that the stab wound inflicted by D was still operating at the time of V's death and significantly contributed to it. It becomes immediately obvious how superficial the test is when compared with the foresight test, with no account whatsoever being taken of the various factors which have a bearing on the moral blame worthiness or otherwise of D.⁷⁹ As far as the position in India is concerned it can be confidently asserted, in the light of the case of *Nga Moe* discussed earlier, that the Indian courts would have reached a different conclusion to the one made by the English Court of Appeal in *Blane*.

The ruling by Roberts C.J. in *Nga Moe* may be contentious in one respect. His Honour had given some emphasis to the fact that V had died because he "was unwilling to exercise common prudence and to abide by the proper remedies and skilful treatment available to him". This seems at first glance to run counter to Explanation 2 to s. 299 of the Indian Penal Code which reads:-

"where death is caused by bodily injury, the person who causes such bodily injury shall be deemed to have caused the death, although by resorting to proper remedies and skilful treatment the death might have been prevented."

However, it may well be that the ruling in *Nga Moe* was correct if the Explanation was accorded a restrictive interpretation. Under this interpretation, the Explanation would cover cases where V died because proper remedies and skilful treatment were unavailable to save her, for instance,

in its judgment: see G. Williams, *Textbook of Criminal Law* (2nd ed., 1983) p. 397;

H.L.A. Hart and T. Honore, *Causation in the Law* (2nd ed., 1985), p. 360.

77. (1975) 3 All E.R. 446 at 450 per Lawton L.J.

78. (1971) 56 Cr. App. R. 95 and discussed in the main text accompanying notes 57 and 58 above.

79. These factors appear in the main text accompanying notes 74, 75 and 76 above.

due to the remoteness of the region,⁸⁰ or the lack of medical services or facilities at the time when it was needed.⁸¹ But the Explanation would not extend to cases where the right remedies and skilful treatment were both available and known to the medical staff but V had refused treatment.⁸² This is precisely what occurred in *Nga Moe*. To extend the Explanation to such a case would deny the operation of the foresight test and consequently create an unjust result. Surely, it would be unduly harsh to blame D for V's death when V had voluntarily refused the medical skill which the medical staff possessed and knew would definitely cure him. Further support for restricting the Explanation in the manner suggested comes from the Code framers themselves, who made the following comment on the relevance of medical remedies and skill to the causal enquiry:-

"whereas in countries in which good medical treatment is common, it is difficult to suppose that a person inflicting a slight wound on another could contemplate his death as a probable result, such a result may be supposed to enter into his contemplation in a country where bad medical treatment is far more common than good, and, therefore, the definition of homicide ought not to exclude death resulting from a slight wound as the primary or original cause."⁸³

Thus the concern of the Code framers was to deny D the claim that V would not have died had proper medical treatment been available to her. It is quite a different claim altogether (and certainly one which the framers did not have in mind) for D to say that he should not be made criminally responsible for the death of V who had died because she refused to receive the proper medical treatment readily available to her. In passing, it may be observed that the Code framers were subscribing to the foresight test when they spoke of how an accused "could contemplate" his victim's death "as a probable result".

(4) *V having unusual sensitivity which contributes to her own death*: In this set of cases, D has injured V who, unknown to him, has a pre-existing condition which renders her more vulnerable to death. The condition of haemophilia is an instance.⁸⁴ We have already seen other instances in the immediately preceding sub-section such as a weak heart condition⁸⁵ and poor physical resistance resulting from chronic malaria.⁸⁶ In the last sub-section,

80. See *Bichu v. State of Uttar Pradesh* AIR 1958 Allahabad 719 where V died because better medical treatment was not available at the local dispensary.

81. See *Salehat Kadrali v. Emperor* AIR 1949 Nagpur 19 where if an operation had taken place within an hour after the injury, V would have survived.

82. *Contra*, P.S. A. Pillai, *Criminal Law* (7th ed., 1988), p. 415 citing an old English authority, *R. v. Holland* (1841) 2 Moo. and R. 351 for support.

83. *First Report on the Penal Code* (1846), p. 249.

84. *State v. Frazier* 339 Mo. 966, 98 S.W. 2nd 707 (1936).

85. *Hubbard v. Commonwealth* (1947) 304 Ky. 818, 202 SW 2d 634.

86. *Nga Moe v. The King* AIR 1941 Rangoon 141.