Anticipating the strategic role of EU law in the development of communications technology in a fragile natural world

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“In a culture like ours, long accustomed to splitting and dividing all things as a means of control, it is sometimes a bit of a shock to be reminded that, in operational and practical fact, the medium is the message.”

I Introduction

Law is a formidable and powerful force in society. Accordingly, knowledge of legal dynamics is directly relevant to both the regulation of communications technology (CT) and the regulation of environmental and natural resources, including the protection of indigenous peoples. Furthermore, the development of regional legal communities such as the European Union, as part of the globalisation process is extremely important. However, the role of law as a strategic force is often ignored, by both lawyers and non-lawyers, partly as a result inertia and stagnancy associated with the protectionism of the legal profession.

The European Union itself, and through the World Trade Organisation, will play an important role in the shaping of the context in which both communications technology and protection of the environment operate. The EU is setting the agenda in relation to the development of the ‘information society’, the establishment of a single market, the development of ‘Trans-European Networks’, the liberalisation of telecommunications, the maintenance of competition, the establishment of technical standards, the initiation of regulation of the internet, the protection of the environment, the protection of human rights and possibly the protection of indigenous people. Failure to understand the present influence and to anticipate the future trends of developments within the European Union, will probably undermine the coherence of any strate-
gic approach to the world of information.

This paper will outline the role of the European Union in the development of the global approach to the regulation of information networks, in a world which is increasingly sensitive to the fragility of the natural world. It will explore the nexus between them, and also propose some basic strategic considerations to implement the objectives of protection of the natural environment in a time of unification of information networks. It suggests the need for not only operational knowledge of EU, but also strategic.

2 The need for strategic awareness of law

People and organisations are aware of law to varying degrees. Obviously there will be greater awareness in relation to areas that directly concern them. It is clear that operationally, law is the water in which we swim. Apart from areas of direct involvement, or operational law, there is a vague sense of its pervasive presence, but often without perceiving the exact dynamics involved. Familiarity with law is not unlike familiarity with the weather. Certain implications are understood. If it rains, bring an umbrella. Certain patterns are clear. There might be less rain in summer time. Certain indicators may help such as experience or weather forecasts. Thus it might be argued by analogy, that individuals do not need to understand the process, but only the product. However, in relation to law this would be to ignore the regressive role of the legal profession.

It is axiomatic that all early lawgivers claims authority from divine sources. The lawyers tended subsequently to operate as elite groups, like a priestly class. The contemporary profession in many European countries, still manifest the mantle of the magician. The aura which is reflected from the power of State apparatus is complemented by the deliberate cultivation of a mystique of tradition and complexity to justify the anachronistic perpetuation of an often medieval ethos. The factors which promote the persistence of this culture are mainly economic. Professions seek to protect themselves from competition, and in particular from new entrants.

But that should not spread a fog which obscures the reality, relevance and ramifications of law. Because the profession has become inert rather than proactive, seeking to cushion itself from competition, the need for awareness of the strategic role of law, necessarily devolves to those who prepare projects. There needs to be an awareness of how legal developments will impact on the total context in which projects operate, particularly in dynamic domains of contemporary significance. This makes knowledge of law imperative for designers of projects in relation to CT and the environment, or both.

In summary,

• There is a need to appreciate the strategic importance of law, in addition to but apart from its operational importance, particularly in
view of the regressive nature of the legal profession, and especially in relation to dynamic areas such as CT and the environment.

3 Unique nature of the EU

In the story of the ‘Elves and the Shoemaker’, the shoemaker in the morning discovers the shoes, but did not know how they got there. Similarly in relation to the EU, many people may know what the result is, but not be very sure how it happened. High profile case such as Defrenne (which established enforceability of the requirement of equal pay) emphasise, in a very graphic way, the practical significance of decisions of the European Court of Justice (ECJ). The EU is unique among legal communities, especially in its earlier incarnations. Arising from the smouldering ashes of Europe, the blood spilt by the warring States, and the nightmares of persecution and pain experienced on the continent, it was destined to be unique, novel and bold. Legal concepts are an oft-ignored part of the tapestry of consciousness that informed the paradigms that contributed to the destructive momentum in pre-war Europe. Likewise, they have been under-estimated as part of the solution. The EU’s unique nature arose from its unique legal construction. While emphasis may be placed on its political, economic or social dimensions, we must identify it as a legal creature. Legal and political realities, which had become hardened and immutable in warring Europe, needed to be relaxed, re-interpreted and re-assessed.

Accordingly, it is both necessary and useful to sketch briefly some of the basic legal framework of the EU. The European Union refers to the Union which emerged after the Maastricht Treaty, building on the existing Communities which has been developed such as the European Coal and Steel Community (1951), the European Atomic Energy Community and the European Economic Community (1957). Accepting that the original driving force behind the enterprise was the avoidance of war in Europe, the mechanism to achieve this objective was via the integration of the peoples and their political structures, based on the core concept of the common market, or the internal or single market at it became known later.

All of the cases establishing the major principles of Community law have arisen, directly or indirectly from the establishment of the common market and the maintenance of principles of free movement. This legal nature of the Community was explained by the ECJ in the Costa case, which came before it, in the process of explaining how Community law could not be over-ridden by domestic law, where it stated that, “by creating a Community of unlimited duration, having its own institutions, its own personality, its own legal capacity and capacity of representation on the international plane and more particularly, real powers stemming from a limi-
The transfer of powers from the States to the Community, the Member States have limited their sovereign rights, albeit within limited fields, and have thus created a body of law which binds both their nationals and themselves. 4

This principle of supremacy of Community law, is complemented by the principle of ‘direct effects’ articulated in the Van Gend En Loos case, where the ECJ explained the legal basis of enforceability of rights by individuals, stating that,

“the Community constitutes a new legal order of international law for the benefit of which States have limited their sovereign rights, albeit within limited fields, and the subjects of which comprise not only Member States but also their nationals. Independently of the legislation of Member States, Community law therefore not only imposes obligations on individuals but is also intended to confer upon them rights which become part of their legal heritage.” 5

Galileo’s trial came of at the midpoint of the 30 War (1618–1648)6. The technology of the telescope, which enabled him to make the astronomical discoveries he revealed in Sidereus Nuncius, The Starry Messenger, would also help define the boundaries of thought and reveal the illusory nature of national boundaries, as the communications satellite would do over 300 years later. Independently of the technological development, the Peace of Westphalia, after the 30 Years War is seen to represent the beginning of the concept of the State as we know it, and the development of fundamentally related ones of jurisdiction and sovereignty7. The momentum behind the EC and the movement towards the EU, manifesting new legal constructs, began to bury some of the basic legal concepts that shape the world we live in, much as Galileo’s discoveries did, when the reflections of the starry realms were seen on the mortal and mundane.

CNN and all the other bulletin boards of the global village constantly reveal the failed harvest of 17th century concepts in contemporary contexts. Mass movements of people occur, as with the fall of the Berlin Wall or the events in Rwanda. De-centralised and diffuse wars, and growing international crime, hasten the calls for global solutions. CT defies national legal control. Environmental problems, such as global warming and the hole in the ozone layer, ridicule and render irrelevant the sanctified concepts of jurisdiction and sovereignty. The development of indigenous rights, new regional communities and world trade institutions further erase the artificial human borders on the globe of our imagination and reality. The EU is in the vanguard of the process. The grundnorms which it utilises are essential contours of the world in which we now live. With the combined force of its members, its agenda becomes hugely important in any assessment of the strategic forces at work in the foreseeable future.
In summary,

- The EU is a legal construct
- The EU is unique as a legal construct
- It re-defines legal concepts
- It provides the model for other regional developments
- It is necessary to be familiar with the strategic as well as the operational consequences

4 The EU. National, regional and global

Experience may be a useful master. It may also be a poor one, especially if some central ingredients have been altered. One of the dangers, in this context is that of the denial of the efficacy of law, because of the experience of the inefficacy of international law. However, the crucial distinction derives from the unique nature of EU law as explained above. The operationalisation of globalisation is not as easy as the theoretical prediction of its essence, inevitability and emerging reality. Rather it is regionalisation that has been, the key operational force in the short-medium term. The debates about the reality of globalisation as an economic phenomenon are keen ones. The debate about the nature and consequences of regionalisation are also heated. Preusse, argues that

“Taking the number of new or enlarged regional agreements during the 1980’s as an indicator of region-building, a new world-wide move towards regionalization can be diagnosed.”

But it is legal regionalisation that is central. Whereas international communities and structures had faded into the background due to a lack of enforcement powers and inappropriate legal constructs, the novel appropriately-designed legal community is different.

Both the development of CT and environmental awareness are central parts of the process of regionalisation and globalisation. Both suggest the actuality and necessity of a global, unified perspective. Furthermore, the integration of peoples is part of a deeper re-unification process. As Carl Sagan wrote, from his scientific and humanist perspective,

“Human history can be viewed as a slowly dawning awareness that we are members of a larger group. Initially our loyalties were to ourselves and our immediate family, next, to bands of wandering hunter-gatherers, then to tribes, small settlements, city-states, nations. We have broadened the circle of those we love. We have now organised what are modestly called superpowers, which include groups of people from divergent ethnic and cultural backgrounds working in some sense together-surely a humanizing and character building experience. If we are to survive, our loyalties must be broadened further, to include the whole human community, the entire planet Earth. Many of these who run the na-
tions will find this idea unpleasant. They will fear loss of power. We will hear much about treason and disloyalty.”

But apart from those losing power, there are other serious challenges. Chomsky believes that free trade regional bodies and multilateral bodies are conspiracies which will degrade further the position of poorer countries. He also believes that agreements such as NAFTA, ignore environmental considerations while they protect investor rights ‘in exquisite detail’. Free trade and environmental protection are often seen to be incompatible or antagonistic. The fact that regional bodies such as the EU and perhaps MERCOSUR in South America and NAFTA in the North, have been successful as new legal mechanisms, does not mean that they are desirable, welcome or inevitably good. The Zapatistas, fighting in the jungles of Mexico, base their resistance on indigenous rights in the face of NAFTA policies that are destroying the indigenous economy, once again. They present a curious relevance to this topic by their appearance in the jungled hills with a modem in one hand and a molotov cocktail in the other. From such a perspective, the regional bodies are newer, nastier types of machine to perpetuate and pursue the rapacious policies that have characterised the history of the relationship between Euro-America and indigenous people around the world.

The decline of the nation state, and the Zapatista phenomenon might suggest that post-national terrorism will be directed against perceived monolithic regional bodies. Both the left and right have already joined in condemnation of Brussels imperialism. It might be predicted that dissident groups in the future may turn their attention to the EU. Wherever speculation may bring us, it is clear that minority considerations and concerns must be woven into any Union fabric, for it not to fail or be flawed. Protection and promotion of diversity, pluralism and inclusivity, must be mediating values which need to be part of the macro-thinking behind constructs of the nature of the EU. This is so particularly where minority groups have some central contributions to make to necessary solutions. For instance, by ignoring the complexity of traditional cultural knowledge, we have not only disregarded the culture of other peoples, but also impoverished our own understanding of the environment. In relation to traditional environmental management Posey explains,

“Scientists use the term indigenous knowledge systems (IKS) to describe the totality of information, practices, beliefs, and philosophy that is unique to each indigenous culture. Such a system may be commonly held within a community or indigenous society, or it may be known only to specialists, tribal elders or lineage groups. The term traditional ecological knowledge (TEK) describes those aspects of an indigenous knowledge system that are directly related to the management of and conservation of the environment.”
In relation to TEK, Johnson explains that it is

“... a body of knowledge built by a group of people through generations living in close contact with nature. It includes a system of classification, a set of empirical observations about the local environment, and a system of self-management that governs resource use.”

We in Europe, perhaps can learn from such experience, now that we are a little better able to listen. Those seeking to promote excluded, marginalised or alternative views must engage with, and input into new legal constructs, in order to direct them away from trodden paths to new integrative policies. Legitimate environmental concern has often been communicated as catastrophic, cataclysmic inevitability by choirs of cassandras, content with the dire warnings, in lieu of attainable, bold or imaginative action. The issues are not ones of the opposition of irrec- oncilable forces so much perhaps as the failure of the imagination. Failures of the imagination may occur when our mental furniture appear as fixtures and not as furnishings which are moveable. The legal concepts have been re-arranged already. Many may not have realised. The fluid nature of the transitions mean that it is opportune to input new thinking to condition the re-alignments that are occurring, recognising the reality of the national-regional-global momentum and the opportunities provided. An holistic conception of the processes requires an understanding of the realities and an appropriate response.

In summary,

- The move has been national-regional as well as national-global
- The regionalisation implications for the environment and CT are related to but distinctly from the inherent globalising nature of both considerations
- The EU is the best example of legal regionalisation
- The construct of the EU facilitates input, which non-legal processes of globalisation may not seem to do

5 EU and the environment

Concern for the fragility of the natural world was a concern whose gestation paralleled the birth of the EU. After the conflagration of the Second World War, the concerns were more about the keeping the ‘dogs of war’ locked up and the machinery of destruction quiet. The Cold War shifted attention in the West, to the process of uniting against a perceived common enemy. As the awareness of environmental degradation permeated the popular and political consciousness, the EEC (as it then aas) was in a good locus to channel some of the energy which was emerging. Legal regionalisation is believed to be leading to a deeper degree of integration than that occasioned by multilateral organisations. Thus it is argued, that the protection of environmental interests is secured in a more effective way by regional bodies, of the nature of the EU13.
Initially the legal base for action was the formation of the common market. As this was unsatisfactory in the long term, the Single European Act saw the insertion of the environment into the Treaty provisions. This was elaborated in the Maastricht Treaty, which outlined the role of the Community in relation to the environment. This represents a clearly defined legal base, although it is not the exclusive legal base for matters which may in some way concern the environment. Thus Article 130r says (inter alia),

1. Community policy on the environment shall contribute to the pursuit of the following objectives:
   – preserving, protecting and improving the quality of the environment;
   – protecting human health;
   – prudent and rational utilisation of natural resources;
   * promoting measures at international level to deal with regional or worldwide environmental problems.

2. Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principle that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay. Environmental protection requirements must be integrated into the definition and implementation of other Community policies.....

This gives an indication of the base of legal action. The new Article 3c of the Treaty of Amsterdam continues the integration of environmental issues into every aspect of policy making. Thus,

*Environmental protection requirements must be integrated into the definition and implementation of Community policies and activities referred to in Article 3, in particular with a view to promoting sustainable development*

The environmental consideration is now a pervasive one. This is consistent with the judicial approach before the Maastricht Treaty. One example is the case of the Commission v Denmark14. In this case it was accepted that the protection of the environment could be invoked as a legitimate qualification to the principle of free movement of goods under Article 30 in certain circumstances, despite its absence from the list of qualifying considerations laid down by Article 36.

The EU has made a significant contribution to the development of an environmental agenda. It is necessary to understand this, to anticipate the complexion of the politico-legal environment in which environmental issues operate. Of course this is not an argument for a Euro-centric view of the world. An holistic approach to environmental issues, and the reality of global interdependence would render such an approach unsustainable. Viewed from the Arctic, the world has different spheres of common interest. Finland and Sweden may have more in common
with Canada than the Canaries. But regional developments within the EU should assist people engaged in the struggle for environmental enhancement in corresponding parts of the globe. In particular, the combined and synergistic relationship of the Member States should facilitate the use of leverage to promote environmental concerns in international contexts.

In summary,

- The EU protects the environment
- It may achieve a deeper level than multilateral level
- The policy will become conditioned by and integrated with other policies
- Failure to anticipate the impact and cross-fertilisation of other factors will impair understanding

6 EU and communications technology

In the EU, CT is regulated from a number of perspectives. The facilitation of the attainment of the single market is the foremost force dictating the regulation. Thus the free movement of CT goods, and the free movement of CT services have been important. The general harmonisation of technical standards has been of crucial importance. The promotion of research and development in relation to CT to improve the living standards of the Community and its competitive advantage with regard to the rest of the world, has been a key goal. The provision of protection for Intellectual Property Rights has been as a central plank of policy.

Some contours of future development as a result of law are clearly discernible such as,

7(a) Liberalisation – The trend in relation to liberalisation of national CT concerns established principally by the Conservative party in Britain in the 1980s, has spread far and wide rapidly. On a regional level, the raison d’être of the EU will support further and deeper liberalisation. This is reinforced by multilateral developments such as the World Trade Organisation. Thus competition is enhanced, and ultimately the consumer should get the best service, produced by the most efficient undertakings at the lowest price.

7(b) Competition Law – Liberalisation and de-regulation emphasise the need for strong competition or antitrust law. This is the net which Microsoft is currently enmeshed in. It provides a useful control on the possibility of free market abuses. Enforceable rights also derive from some directly effective provisions. Unlike national competition law, which has been fairly toothless, EC competition law can escape claustrophobic, national political contexts to reach decisions. Undertakings can be fined up to 10% of their turnover worldwide.

7(c) Culture – The emerging legal concept of culture will play an important role in the evolution of CT. Spearheaded by the French, it was introduced to qualify a purely economic analysis of film, in the first instance and is now to be found in Article 128 of the EC Treaty.
7(d) Content – The emergence of concerns about pornography and the exploitation of children, and the perception and realisation of the need for regional and multi-lateral solutions, combined with greater institutionalisation of the European Convention on Human Rights, will mean that there ultimately will be a shift of interest from infrastructural concerns to content issues.

7(e) Intra regional, regional development – The EU, based on the idea of the single market, was always aware of the competitive disadvantage of peripheral regions. The suitability of CT to the solution of the imbalance, will mean that it will play a significant part in the networking equation.

7(f) Return on Investment/commercial exploitation – The EU, particularly through the ‘upwards harmonisation’ demonstrable in relation to Intellectual Property, is concerned that those who create IP, receive a just reward, in order to enhance research and development, promote protection of economic rights. Indeed, if anything, rights are so well protected in the EU now, that it could interfere with artistic creativity and other social goals.

7(e) Convergence – Not only will the technologies converge, but there will be a convergence of policy and legal compartments. This is developed below.

In summary,

- The anticipation of the development of CT must be informed by awareness of EU developments

7 CT and the environment

The development of CT, a major societal-shaping force will impact on the approach to environmental issues. Thus CT developments and the environment are inherently linked. There has always been a direct link, in the sense that CT has been an instrument of expansion, often part and parcel of the process of colonisation, as well as of war. A benign balance will be restored as the pendulum is poised to return. CT is an important aspect of environmental management from the perspective of prevention, monitoring, identification and communication. CT can help monitor, detect, illustrate, demonstrate and prevent. The satellites that define the CT era, that Arthur C Clarke understood would effectively erase national boundaries, have been utilised to assist in crucial environmental research. They also enhance the perception of the inter-dependent nature of the globe, which has implications for receptivity to environmental initiatives. Paradoxically perhaps, the global village does not frighten the indigenous movement.

“As the Indian movement gathers momentum... it will become apparent that not only will Indians survive the electronic world of Marshall McLuhan, they will thrive in it.” 19
Debate about the development of CT has been polarised by perspective. One analysis suggests an over-industrial-commercialised infrastructure, predicated on economics and commerce, leading to CT honey-pots and hubs, and marginalised voices in an environmentally-degraded world. CT interests become a cuckoo in a nest of limited resources. This leads to a fragmented, commercially-dominated and reactive agenda. Another analysis suggests that CT could be utilised to promote environmental values in an integrative, communitarian, pluralist, and proactive way. CT then is the swallow that foretells the summer. This is reflected sometimes in the debate within CT which suggests the choice between the broadcast model of technology characterised by Kapor as breeding ‘Consumerism, passivity, crassness and mediocrity’ or the internet model which breeds ‘critical thinking, activism, democracy and quality.’ These dualistic debates are important, but often pay scant regard to the signals from the legal world.

The composite, constituted networks may not be inherently positive or negative, but are capable of being either, depending on perspective. The important point is the degree of positive or negative inputs or re-inforcers for any particular perspective. There are some signals. Over-protection of copyright, suggests a surrendering to the forces of commerce, unmitigated by other social considerations. However even than, there are traps for the unwary, of which competition law is the most obvious. Part of the environmental movement seems to prefer to play the prophets of doom, keening direly on the precipice of disaster, rather than act as proactive participants in strategic partnerships, to exploit opportunities presented by new legal structures.

In summary,
- The development of CT is part of the response to environmental issues
- Proactive input into the equations must be made by those pursuing pro-environmental agendas

8 The EU, citizens, human rights and indigenous people

The EU is ultimately about people, or so it would claim. The development of EU citizenship and the steady consolidation of fundamental rights within the EU underlines this. The protection of the environment is often predicated on the rights and interests of the people in it. The protection of the fragile natural world will revolve around the experience of people. Article 130 emphasises the role of people, as do other headings such as the protection of public health. International environment conventions, often place the individual or group as the raison d’être for their existence. It has been people who pollute and destroy, kill and maim. It is people who suffer the consequences of environmental degradation. It will also be people who can repair and protect the environment.
One group whose fortunes will parallel the fortunes of fragile habitats are the indigenous peoples. Again, the EU may be significant for them. A combination of the principle of supremacy of Community law in Costa, complemented by the principle of direct effects articulated in the Van Gend En Loos combined with the EU protection of fundamental rights suggests a possible path to the enforceability of rights for them. The ECJ has independently accepted that it has a duty to protect human rights as an inherent part of its competence and jurisdiction. Thus the decision of the ECJ in the Nold case is important where it emphasised that,

“As the Court has already stated, fundamental rights form an integral part of the general principles of law, the observance of which it ensures. In safeguarding these rights, the Court is bound to draw inspiration from constitutional traditions common to the Member States, and it cannot therefore uphold measures which are incompatible with fundamental rights recognised and protected by the Constitutions of those States. Similarly, international treaties for the protection of human rights on which the Member States have collaborated or of which they are signatories, can supply guidelines which should be followed within the framework of Community law.” 22

If the international development of indigenous rights continues, then it is likely to be recognised by the ECJ once a justiciable matter arises, and where appropriate locus standi requirements are met. Arguments fashioned from international conventions could be based on self determination, protection of bio-diversity, cultural rights or religious freedom for example. The European Convention on Human Rights might also be relevant.

Parallel to the development of the ECJ’s jurisprudence in the area of fundamental rights, the European Commission is actively developing a policy on the external dimension of human rights. One of their priorities as expressed in a Communication on the External Dimension of Human Rights Policy is the protection of indigenous people. This may also ultimately enhance the possibility of enforceable rights. It is clear that the Commission conceived indigenous rights as a purely external matter. There are clearly identifiable indigenous people within the EU, such as the Saami in Finland and Sweden, who could not surely receive less protection than those outside?

Apart from the direct fundamental rights avenue, there is the possibility of reliance on international legal obligations in the context of environmental protection to qualify trade in goods and services. The protection of the environment is the legal darkroom from which the majority of indigenous rights are emerging. This is particularly relevant where the international obligation
has been implemented by a legis-
trative measure within the EU. The
linkage of trade and environmental
considerations may create a niche for
arguments associated with protection
for indigenous people to emerge. The
EU has been an important arena
for the development of enforceable
legal rights in relation to the envi-
ronment. This development may
provide an additional distinct basis
for protection of interests of indig-
enous people in a more general
sense. The greater the feedback
loops, the greater the opportunity to
inform the community dialogue with
regard to the optimum protection of
the environment. Emergence of an
over-arching legal infrastructure,
expands the input possibilities.
Likewise, the impact of other ar-
eas, such as CT, on people is increas-
ingly significant. The EU is provid-
ing leadership here again, as national
control is futile, while multilateral
control is not feasible, in the short
term at least. As with the environ-
mental context, the rights and duties
which inform the digital age and the
information society will be largely
conditioned by EU and other regional
bodies, informing the emergent in-
ternational consensus, through dia-
logue, consensus and leverage.

In summary,
• The protection of people’s rights
  is an avenue to promote environ-
mental concerns
• The EU is increasingly protecting
  human rights
• This will condition all policy ar-
eas
• Particular group rights, such as in-
digenous rights which may en-
hance environmental protection,
may be afforded greater protection
through the EU

9 Other areas, Trans European
Networks, culture and trade

The emergence of Trans European
Networks is one obviously impor-
tant, possibly impacting area. Also,
the development of a legal concept
of ‘culture’, is another vein which
may be mined to produce legal ar-
guments calculated to impact on the
development of IP rights. The French
objections to the inclusion of film in
the GATT negotiations on the basis
of the culture argument was a signal
of the possible implications of the
inclusion of culture in the legal con-
struct of the EU. The ECJ accepted
in the Cinéthèque case, an argument
based on culture in order to dilute the
application of the Dassonville defi-
nition (of measures of equivalent
effect to quantitative restrictions) to
restrict free movement of goods. Ar-
ticle 128 (inserted by the Treaty of
European Union) recognises the
need to promote culture, and contem-
plates co-operation with third coun-
tries and cultural exchanges. Thus
other forces may be summoned to
assist in the development of a perva-
sive, environmental-protection
agenda.

In external trade and competition
law, the European Commission sees
an opportunity for leverage, deriv-
ing from combined strength. Because
of deeper environmental protection, the logic would suggest that greater integration and leverage could provide the vehicle for linkage with trade development. The environment has been largely left out of the World Trade Organisation equation, although other linkages were established such as between trade and IP, through the concept of TRIPS. This was to satisfy US calls for greater IP protection. IP has a greater political momentum behind it, than human rights or the environment. Thus there is a clear channel for promotion of an environmental linkage, utilising existing regional leverage.

Thus other provision of the Treaties will affect the development of CT, the environment and both together, enhancing the possibilities of linkage.

10 The convergence

Perhaps the central illuminating theme, that reveals the grain of developments is the idea of convergence. The idea of convergence also helps to unify and suggest the nature of the development of the CT and the environmental agenda. Convergence needs to be understood on a number of levels.

10 (a) Convergence of Technologies – The orthodox, mainstream conception of convergence relates to the technological interaction of formerly separate and discrete technologies.

10 (b) Convergence of Economies – The process of globalisation, as understood principally be economists, seems to refer to the liberalisation of trade in goods and services, which they would see as an economic phenomenon.

10 (c) Convergence of Legal Systems – Lawyers would perhaps understand the concept of convergence as relating to new models of sovereignty, representing a shift away from the nation state. Even the development of GATT would be seen as revolving ultimately around a legal instrument.

10 (d) Convergence of Policy – Within the new regional communities, the pooling of sovereignty allows and requires a convergence of national policy. The process of economic and monetary union within the EU is perhaps the best contemporary example.

10 (e) Convergence of Concepts – To ensure the attainment and functionality of new legal constructs, new legal concepts are necessary. One example would be the emergent concept of commercial communications.

10 (f) Convergence of Strategic and Design Responses – In view of the above convergences, it is obviously imperative for those operating within the new parameters to re-define strategic and design functions.

10 (g) Convergence of the Convergences – All the convergences lead perhaps to an overwhelming undercurrent of unification.

The key document in recent times is this area in the EU, is perhaps the Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors, And the Implications for Regulation. To-
wards An Information Society Approach\textsuperscript{31}. As the policy areas begin to merge, so will the substantive areas of law. The convergence complements the linkage that is happening between areas which hitherto were kept somewhat separate. On a multilateral scale, linkage has occurred most noticeably between Intellectual Property and trade in the WTO. Linkage will allow modification of policies. Linkage will be utilised by those who have leverage. Leverage will come from the combined force within regional arrangements, such as the EU, NAFTA, MERCOSUR, or SADC\textsuperscript{32}. Examples of the use of leverage to attain linkage is best exemplified by recent attempts by the EU to link trade and human rights. Without the regional leverage, such a policy would be ineffective. The example of the recent claims of extra-territorial jurisdiction in relation to the airline industry, is another example.

Another convergence, on a deeper level, will be the modification of European conceptions by exposure to perspectives from elsewhere. CT must be about communications. Communications must increase the diversity and plurality of perspective. This should ultimately enhance the values which counteract negative, divisive forces of the type that engender the divisions which have beset Europe for centuries. On a deeper psychic or psychological level, CT or the internet model of CT, may help avoid the historic mindset that were seen to be so important in the development of attitudes hostile to the environment.

In summary,
- Convergence must inform any approach developed to deal with issues associated with CT and the environment, in particular in a legal sense
- This leads to the significance of leverage and of linkage

10 Conclusions

“Generally, he who occupies the field of battle first and awaits his enemy is at ease, and he who comes later to the scene and rushes into the fight is weary. And therefore, those skilled in war bring the enemy to the field of battle and are not brought there by him.” \textsuperscript{33}

Thus it is important to be aware of the fusing of forces in a spiral of formerly separate concerns. The global village may be a brash, blaring, garish, MTV marketplace, but it must and can be sensitive to the fragility of the world it operates in. The EU will be the force that shapes the evolution of forms. Systems which are not consistent with the conceptions, ethos and trends of EU, will fail, or be sub-optimum. Those charged with intellectual responsibility for input into the development of CT in a fragile natural world, cannot afford the luxury of a lack of awareness of law, irrespective of how foreboding, complex or uninteresting it appears. There needs to be awareness, appreciation and integration to provide for coherent and feasible solutions. Ironically, contemporary concep-
tions of digital webs, and networks, are closer to older conceptions of the universe. Laurens Van Der Post talked of the deep desire to unite what is oldest in us with what is newest. It is not that leap of comprehension that will be the greatest challenge. Rather it is the whereabouts of the glass bridge between the present and the future which is sometimes difficult to see, in the swirling mists of incessant change. The EU could be the main avenue to the crossing point.

In summary, therefore, for those concerned with the role of CT in a fragile natural world, it must be remembered that,

- There is a need to appreciate both the operational and strategic relevance of law
- Strategic legal thinking may be difficult to encounter
- The EU is a unique legal construct, which provides a blueprint for other regional and multilateral legal communities
- In view of the above, it is helpful therefore to return to the basic EU legal grundnorms
- The EU has a unique role in the evolution of CT and the environment
- The EU is developing a jurisdiction in relation to the protection of human rights which may be a source of rights in relation to CT and the environment
- CT is directly relevant to environmental issues
- Convergence, in the widest sense, will define the growth of most EU policies and create opportunities for leverage and linkage
- The lessons of study of the strategic role of the EU should be integrated into the planning and preparation of projects, in particular those associated with CT and the environment.

Finally, it is appropriate to remember the context, here within the Arctic Circle, and draw upon more traditional, clearly defined strains of wisdom.

“Just as one tree standing alone would soon be destroyed by the first strong wind which came along, so it is impossible for any person, any family or any community to stand alone against the troubles of this world.” 34

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3 The European Community is the central pillar of the construct of the European Union.
8 Van Bergeijk and Mensink, ‘Measuring Globalisation’, *Journal of World*


15 See for example, Kassi, A Legacy of Maldevelopment. Environmental Devastation in the Arctic, in Weaver (ed), *Defending Mother Earth, Native Perspectives on Environmental Justice*, Orbis at 72.


17 For example, Council directive of 14 May 1991 on the Legal Protection of Computer Programs.

18 See for example Com 96 (483), Protection of Minors and Human Dignity in Audio-Visual and Information Services.


26 For a recent comprehensive article with regard to likely developments in general, see ‘Towards an Environmental Constitutional Law’, European Environmental Law Review, April, 1997 at 113.

27 See for example, Living and Working in the Information Society. Peo-
ple First COM (96) 389. and Protection of Minors and Human Dignity in Audio-Visual and Information Services, COM (96) 483.


31 COM (97) 623, Brussels, 3 December 1997.

32 SADC (the South African Development Community) ECOWAS.


34 Haida Chief Skidegate March 1966 Communique No 12, Traditional Circle of Indian Elders and Youth, Haida Gwaii, Queen Charlotte Islands, Skidegate Massett.