# A Curriculum with Human Rights in an Engineering Program and its Implementation

### Dushyanthi Hoole and S.R.H. Hoole Faculty of Engineering, University of Peradeniya, Peradeniya, Sri Lanka

### Abstract

Human Rights has been described as the most important political legacy of the last century. But it remains an esoteric part of the curriculum for lawyers and even that usually in non-American law schools. Engineers rarely hear of human rights as part of a required program. This is a two part paper. The first gives real-life scenarios from Sri Lanka and other countries that may be used as a starting point for discussions in class demonstrating the many important legal and business reasons for teaching human rights to engineers. The second part of the paper gives the curriculum developed specially for engineers and delivered at the University of Peradeniya and the experience in teaching the course.

#### The need to teach human rights to engineers

In the US "the business system" is well-tested and mature. It keeps domestic laws relatively unbroken and an engineer can generally manage day-to-day affairs within the law from commonsense, without knowing exactly what the laws are. For example, hiring in a US corporation would involve someone knowledgeable in the law so that child-rights laws will tend not to be violated.

With international law things are different. Human rights come increasingly through treaty obligations and are often in force without a national discussion. With engineers increasingly engaged in multi-national transactions, they need to be mindful of their obligations to human rights. The laws are international in character. We need clearly and necessarily to understand our obligations. The legal argument for the importance of engineers' knowing their human rights obligations has been advanced by Hoole<sup>1</sup>. We leave it to readers to consult that paper for details.

# **Definition of Human Rights**

There is really no formal definition of human rights except the meaning that derives from language – the rights of the individual human being. Its precise meaning has evolved over time.

The idea of human rights, having its roots in the *Magna Carta*, originally was more about the rights of the privileged – rights to property, to vote, to education, etc. It has been broadened over time and the rights themselves expanded as the body of laws dealing with it expanded. What these rights are is fluid since different peoples come under different systems and even a combination of systems – the UN's Universal Declaration of Human Rights, the UN Conventions, the European Convention, the African Charter, and the Inter-American System of Human Rights. Asia still has no special convention although attempts are under way to create one without too much success. Thus a Sri Lankan would come under the UN Conventions only (and of these only those that Sri Lanka has signed) while an American would come under that and the Inter-American System.

The older body of laws, referred to as Humanitarian Law (associated with the Geneva Conventions) dealt with war. It specified the duties of states. Human Rights as a bold and new concept emerged after Hitler's atrocities and President Roosevelt's 1941 speech on the 4 freedoms, dealing with speech, religion, freedom from want and freedom from fear. The Universal Declaration that followed after the war and the conventions have slowly and steadily expanded these freedoms. Increasingly, the responsibility for ensuring these freedoms has shifted from states to individuals, although still, by and large, it is still states that can be sued for violations.

# **Object of this Paper**

The purpose of this paper is two-fold. Since the case for teaching human rights to engineers has been already made<sup>1</sup> and at length, instead of repeating that material, we use this paper to focus on the teaching methods used. We first give case studies that we used in teaching human rights to engineering students at the University of Peradeniya. These studies are based on real and hypothetical situations engineers can find themselves in, in the course of their work. Being real-life situations, they animate students and capture their imagination, thereby bringing out complex legal principles through useful dialog. These studies, given the limitations of space, are merely the cues for a discussion in class and can be used to take the discussion in various directions by any instructor while bringing out important principles. Lecturers in other countries can use similar situations they are familiar with.

Thereafter, as the second part of this paper, we give our experience in implementing the curriculum.

# Some Scenarios useful in Teaching

We give below real-life scenarios that, as mentioned above, are useful as a cue in class to spark off a discussion and bring out the importance of engineers understanding the role of human rights as it applies to personal culpability as well as the well-being of their company.

*Employment of child workers and the complex rules governing age limits and hazardous work:* A Sri Lankan engineer used to employing 14-year-olds as workers on his construction site goes to labour-short Singapore and gets authorization to bring in a labor gang from Sri Lanka. He would be in violation of the International Labor Organization (ILO) Conventions<sup>2</sup>. This case is then elaborated upon to bring home the complexities of the ILO Conventions regarding age limits, what hazardous work is and the different age limits that apply to different countries and different types of work and so on.

### Product label:

Examples of enlightened corporate employers are used to demonstrate that students in class prefer working for them to other companies. Students would even be willing to choose their products from equally priced goods from an enlightened company and another unknown company. This is then used to bring out the advantages to a company that has a good human rights record.

Public consumer campaigns against Nike for its poor record in labor/human rights standards<sup>3</sup> can be used to high light the damage to a company's product label. Similarly, public consumer standards as by Reebok<sup>4</sup> can be used to demonstrate the advantages in building up a product label.

# The Laws of Geneva:

An engineer has a service call from the war-zone in Sri Lanka and proceeds there with his technician. On the way, passing an army camp, a soldier asks for a lift to the sentry point down the road where he is to be on duty. Traveling with the soldier, a claymore mine is detonated by the militants and the technician dies. By giving a ride to a soldier, he had lost his and his vehicle's non-combatant status and therefore the protection afforded by the Laws of Geneva<sup>5</sup>. This can then be built up to explain the Geneva Code and one's obligations to one's employees while operating in a war-zone.

# Impact assessment of projects funded by the World Bank:

A major Sri Lankan corporation spends huge amounts of money bidding for a highways project under World Bank funding and is successful. Thereafter, villagers en route complain that they are being displaced from their homes by the project and that it ruins their environment. Consequently, a World Bank Inspection panel holds an enquiry into whether the project violates human rights and its social impact. The project is threatened with cancellation. This story from the Southern Highways Project from Sri Lanka (or equivalent projects familiar to students) can be used as the cue for a discussion on assessing the social and human rights impacts of projects.

China's project to transfer ethnic Chinese into Tibet is the best known example so far of the World Bank's canceling a project following complaints and an adverse report by its Inspection Panel<sup>6</sup>.

Another example whose details are readily available on the Internet for teaching purposes is the Narmada Dam Project where, after initial delays, India has decided to go it alone and fund the entire project itself.

# Liability through Partners who violate human rights:

An enlightened Sri Lankan engineering company constructs housing. Unwittingly, it orders fittings from a partner who employs child labor. The company is liable. Several examples can be cited from the experience of US Companies that produce overseas and got into trouble because of their partners. Levi Strauss' code of conduct for the partners it deals with is instructive<sup>7</sup>.

The consumer campaign against Nike already referred to,<sup>3</sup> is easily studied through Internet sources and makes valuable teaching material.

#### Personal Liability through the Criminal Court:

The army clears the population round its base which it perceived as hostile and a cover for guerrillas, and constructs housing for reprieved criminals in an effort to plant a friendly population around its base – a real scenario from Sri Lanka from the mid-1980s. An engineer bids for the contract and constructs housing. Years later, in a potentially real situation, he goes on a holiday to, say Holland. There a member of the hostile population files action as a result of the World Criminal Court declaring such displacement to be a Crime against Humanity<sup>8</sup>. The World Criminal Court, under the so called Rome Agreement, will come into being after 60 countries have signed on to it. Many counties, including Sri Lanka, have not signed on yet, not knowing what things present leaders will be charged with when they go abroad. It is, however, expected to come into operation soon. In a major departure, it will allow individuals to be charged for their private culpability rather than governments as before. Thus in the alleged use of slave labor by Unocal in the Burma-Thailand project, after the court comes into operation Unocal executives may be charged in any country they step into.

#### MFN/GSP:

A developed country, say country A, threatens a developing country, say country B, with revocation of its Most Favored Nation status (or MFN, that is, special trading arrangements with friendly countries). Or perhaps it is favors under the Generalized System of Preferences (or GSP, another form of preferences) that is threatened. And the reason?: the penalized country B's poor record on human rights. The government of Country B in turn takes to task organizations within the country that do not practice enlightened labor standards so as to be back in favor with A.

New Zealand and Australia in particular have been known to use the MFN/GSP regime to demand high human rights standards of their trading partners. Are engineers trained to handle their increased responsibility through these situations arising from Globalization<sup>9</sup>?

# The Curriculum

The curriculum largely consisted of three components: i) International Human Rights Law<sup>10,11</sup> (as in the International Bill of Human Rights) International Humanitarian Law (the four Geneva Conventions and the two additional Protocols thereto<sup>12,13</sup>) and the ILO Conventions<sup>2</sup>; ii) Their application to Engineers; and iii) Some interesting cases under the African Charter<sup>14</sup>, developments in the European Court of Human Rights and the Inter-American Court of Human Rights, and their implications to creating a decent society.

# **Experience in Teaching Human Rights to Engineers**

# Approval:

As at most universities, curriculum is under a higher academic body and needs to be approved. The second author, as the Head of the new Computer Sciences program was mindful of the importance of teaching human rights as well as of the dangers of teaching it in a divided society such as Sri Lanka. Broadly, the oppressed tend to be pro-human rights and the majority tend to be suspicious of it. So the syllabus was proposed in terms of "The Software Engineer and Society", an innocuous topic that needs to be covered for professional recognition by Britain's Council of Engineering Institutions.

We were also mindful of the explosive nature of some of the topics and the possibility of students misunderstanding the lectures and considering them as a slight on a particular community. So an attempt was made to team-teach the course. We, both of us though of different gender but from the minority ethnic group (the Tamil community), were successful at getting a Muslim lecturer to sit through the lectures and discussions so as to get feedback and to ensure that it was not perceived that some secret separatist agenda was being implemented. Our being Christian, that is a minority within the minority, with co-religionists among the majority, was helpful. While we were unable to get a Sinhalese lecturer, that is from the majority community, to team-teach, we expect that to be more easily done now that, having run the course with positive feedback from students, the course certainly stands in the curriculum.

However there have been some complaints by conservative elements based on non-technical stuff being taught under engineering without authorization and by nationalistic elements suspicious of the idea of human rights while a war is on. There is also a general reluctance to discuss the course or to endorse it openly. A call for a disciplinary enquiry has not been acted upon yet by the administration, although it is unsettling particularly in light of its implications to academic freedom.

We take heart, however, in the fact that the medical profession in Sri Lanka has taken the new laws and obligations under human rights conventions very seriously. Sri Lanka Medical Association which is celebrating its 115<sup>th</sup> Anniversary this year will be focusing attention on human rights in the medical profession and the role of doctors in it.

# A Decent Society

A point we drove home again and again is that we need to sacrifice if we are to create a decent society. There is a cost to it. The point is made by the example of servants whom most middleclass homes in Sri Lanka employ. We contrasted a home where a servant is treated like a crook and searched every day as he or she leaves after work with another where a choice is made to trust the servant and being prepared in the process possibly to lose things through theft.

The choice is between

i) Being a decent person not suspecting someone who might be honest and

ii) Being a nasty employer who subjects even honest servants to indignities but in the process protects his home.

When the students agree that the first is the proper choice, the parallel to a society suspecting everyone from a particular community in a time of civil war is drawn. We make the point that war makes monsters out of all of us.

Case studies from the European Court of Human Rights contained in detail through their valuable New Releases (that make valuable teaching resources and are available free) are used to show how the law even protects the rights of hardened terrorists.<sup>15</sup>

# Staff:

For teaching purposes it is usually not possible to recruit a person full-time for such a narrow purpose in an engineering faculty context. Since visiting lecturers may not have the same commitment to or a full understanding of the political ramifications of a course that is so sensitive, or the familiarity with students to handle any problems that might arise, it was necessary that an internal staff member be trained to teach the course. Arrangements were therefore made for one of the authors developing the syllabus to be trained through a 165-hour lecture program at the International Institute of Human Rights in Strasbourg and a special program at the International Centre for University Human Rights Teaching. For others who might be interested in teaching a course like this, it is worth mentioning that the course at Strasbourg (in parallel sessions in English and French) is run annually in the Summer and generous scholarships are available for serious candidates who apply early in the year.

#### Side Benefits:

It is well-known that teaching in less modern societies tends to be teacher-centered and there is little discussion in class. While the problem is recognized, it has been very difficult to draw students into a discussion in class and make learning a two-way communications process with feed-back. However, with a subject like human rights, with some students feeling the need to defend themselves, as it were, the subject was animating and brought out all the expressiveness the students could muster. A moot-court like situation was created with students from the majority made predominantly to argue for the individual and minority students for the State. This ensured moderation and soon the class became fun. In the process, communications skills were certainly exercised in ways never before done in the educational system in Sri Lanka.

# University Issues Informed by Human Rights

Besides the engineers whom we teach, we believe that there are several universal issues that are important for universities and us academics to grapple with. Principal among these, in the Sri Lankan university context but with parallels elsewhere, are three:

i. Whether a teacher who has racial or communal prejudices can treat all his students in class equally. Universities in the West (for example the University of Pennsylvania) have even gone as far as firing academics who expressed opinions inimical to their students and derogatory of them, while others have argued, as in Sri Lanka, that even an

academic has the political freedom to express his views, however offensive they might be to his students. An important corollary is whether a teacher who has derogatory views of a part of his class can be trusted to grade fairly. In Sri Lanka, many academics have contested for parliamentary seats as candidates of a party that claims that Sri Lanka is for the Sinhalese and other communities must consent to being assimilated. Such persons continue to grade non-Sinhalese students who, by virtue of being non-Sinhalese, have not been assimilated and preserved their separate identity. How valid or fair are the grades issued by these academics?

- ii. Whether national security can over-ride a university's commitment to justice and equality. National security is an issue that threatens, in Sri Lanka, the university's commitment to equality. For example, industrial training is a gradable graduation requirement for engineering students. But training through the best training slots – for example at the Ceylon Electricity Board and Sri Lanka Telecomm – is shut to Tamil students saying that Tamil students, regardless of any evidence linking an individual student to terrorism, are a security threat. That is, the teaching programs of the Sri Lankan universities are as a result not equally available to all communities.
- iii. Whether in an attempt to teach some students better, other students can be neglected and their rights violated. In Sri Lanka, professional courses at university are conducted in English whereas education up to high school is by compulsion in the mother-tongue. Thus students switched to English overnight struggle in class sometimes and it is not uncommon for Lecturers to teach in the language of the majority (Sinhalese) ignoring the minorities who know English better than the majority language and were promised a course in English. In a divided society, the problem is compounded by minority students eager for acceptance. Thus when a lecturer asks if it is all right to lecture in Sinhalese, a Tamil student knowing Sinhalese might pre-empt one who does not by saying "You go ahead. I will explain it to the others." At this point, it is awkward for the Tamils not knowing Sinhalese to protest and indeed, having kept quiet, to complain later.

A proper answer to these serious issues needs to be informed by a full understanding of human rights and our legal obligations for which we lecturers are not trained.

Thus teaching human rights to engineering students will also be of wider academic benefit to a university struggling with issues of fairness and justice.

# Conclusions

The course has gone well and all 20 students have completed the course, having enjoyed it immensely. What we would wish for is greater cross-cultural teaching and a full commitment from the university.

#### References

1. S.R.H. Hoole, "Human Rights in the Engineering Curriculum", *Int. J. for Eng. Educ.*, Vol. 18, 2002 (in press). 2. http://ilolex.ilo.ch:1567/english/convdisp2.htm Retrieved on 12 March 2001.

3. Steven Greenhouse, "Nike Shoe Plant in Vietnam is called Unsafe for Workers", *New York Times*, p. 1, Nov. 8, 1997

4. Reebok Intl. Ltd., Human Rights Production Standards, Reebok, Stoughton, 1992.

5. Hans-Peter Gasser, International Humanitarian Law: An Introduction, Henry Dunant Institute, Haupt, 1993

6. Joseph Khan, "World Bank Scraps Loan to China", Intl. Herald Tribune, p. 3, 8-9 July 2000.

7. Levi Strauss and Co., Code of Conduct, http://levistrauss.com/about/code.html Retrieved on 9 June, 2001.

8. United Nations, *Report of the Preparatory Commission for the International Criminal Court*, New York, 6 July 2000. Also available at http://www.iccnow.org/html/u.n..html.

9. Robert McCorquodale with Richard Fairbrother, "*Globalisation and Human Rights*", Human Rights Quarterly, Vol. 21, pp. 735-766, 1999.

10. Thomas Burgenthal, *International Human Rights in a Nutshell*, 2<sup>nd</sup> Ed., West Publishing Co., St. Paul MN, 1995. 11. UN Centre for Human Rights, *The International Bill of Human Rights*, Human Rights Fact Sheet 2, Geneva, 1996.

Hans-Peter Gasser, International Humanitarian Law: An Introduction, Henry Dunant Institute, Haupt, 1993.
The Intl. Committee of the Red Cross, International Humanitarian Law: The ICRC Answers your Questions, ICRC Public Information Division, Geneva. N.d.

14. "Protocol to the African Charter on Human and Peoples' Rights on the Establishment of an African Court on Human and Peoples' Rights," The Review, No. 60, Special Issue of 1998, pp. 243-250, The International Commission of Jurists. Also http://www.dfa.gov.za/for-relations/multilateral/treaties/court.htm retrieved on June 2001.

15. European Court News Release 451 of 17 Sept. 1995, Strasbourg.

DUSHYANTHI HOOLE, B.Sc. Chem. Hons P'deniya, M.Sc. C'bo, M.S. Drexel, Ph.D. USC. Born on 20 June 1955, Dr. Hoole teaches Chemical Engineering at the University of Peradeniya after earning her doctorate under Nobel Laureate George Olah at USC's Loker Hydrocarbon Institute. Her teaching interests are in green chemical processes, food technology, and environmental engineering. She has pioneered web-based teaching in Sri Lanka for distance education for which she was nominated for a Commonwealth Award for Innovation by the Government.

S. RATNAJEEVAN H. HOOLE, B.Sc. Eng. Hons. Cey., M.Sc. Distinct. Lond., Ph.D. CMU, D.Sc. (Eng.) Lond. Born on 15 Sept. 1952, Mr. Hoole teaches Electrical Engineering and Computer Sciences at the University of Peradeniya. A Fellow of the IEEE, he was previously at Harvey Mudd College in California (1987-99), Drexel University, PA Consulting Services, Ibadan Polytechnic (Nigeria), and Engineering Services & Management Consultants (Singapore).

**Acknowledgements:** This work was supported by the National Science Foundation of Sri Lanka under Grant No. RG/00/BG/12. Thanks to Colombo University's Centre for the Study of Human Rights for arranging for one of the authors to be trained at the International Institute for Human Rights in Strasbourg, France. Thanks also to the Canadian International Development Agency for further support for this project through a generous travel and publications grant.