

# Chapter 9

# Global Issues

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# 9.1 Multinational Corporations

- *Multinational corporations* conduct extensive business in more than one country. Examples...
- Globalization: refers to the increasing integration of nations through trade, investment, transfer of technology, and exchange of ideas and culture.
- In the narrow sense: an accelerating *integration and interweaving of national economies* through the growing flows of trade, investment, and capital across historical borders.
- In a more general sense: these flows include *technology, skills and culture, ideas, news, information, and entertainment*.

# 9.1 Multinational Corporations

- The multinational corporations benefits to *home country* are:
  - a) Inexpensive labor
  - b) Natural resources
  - c) Favorable taxes
  - d) New markets

# 9.1 Multinational Corporations

- The multinational corporations benefits to *hosting countries* are:
  - a) New jobs.
  - b) Higher pay rates.
  - c) Access to advanced technology.
  - d) Social benefits due to wealth-sharing.

# 9.1 Multinational Corporations

- Moral Challenges arise, accompanying business and social complications.
  - a) Who loses jobs at home country when manufacturing is taken offshore?
  - b) What does the host country lose in resources, control over its own trade, and political independence and individuals?
  - c) What are the moral responsibilities of corporations and individuals operating in less economically developed countries?
- We need to learn about the concepts *Technology Transfer* and *Appropriate Technology*.

# Technology Transfer

- *Technology transfer*: is the process of moving technology to a novel setting and implementing it there.
- Technology includes both:
  - a) Hardware (machines and installations)
  - b) Techniques (technical, organizational, managerial skills and procedures)
- A variety of agent may conduct the transfer of technology:
  - a) Government
  - b) Universities
  - c) Private volunteer organization
  - d) Consulting firms
  - e) Multinational Corporations
- Transfer Technology is a complex process

# Appropriate Technology

- Appropriate Technology: refer to identification, transfer and implementation of the most suitable technology for a new set of conditions.

## Technology Transfer and Appropriate Technology...

The expression *appropriate technology* is widely used, but with a variety of meanings. We use it in a generic sense to refer to identification, transfer, and implementation of the most suitable technology for a new set of conditions. Typically the conditions include social factors that go beyond routine economic and technical engineering constraints. Identifying them requires attention to an array of human values and needs that may influence how a technology affects the novel situation. Thus, in the words of Peter Heller, “appropriateness may be scrutinized in terms of scale, technical and managerial skills, materials/energy (assured availability of supply at reasonable cost), physical environment (temperature, humidity, atmosphere, salinity, water availability, etc.), capital opportunity costs (to be commensurate with benefits), but especially human values (acceptability of the end-product by the intended users in light of their institutions, traditions, beliefs, taboos, and what they consider the good life).”<sup>5</sup>

Examples include the introduction of agricultural machines and long-distance telephones. A country with many poor farmers can make better immediate use of small, single- or two-wheeled tractors that can serve as motorized ploughs, to pull wagons or to drive pumps, than it can of huge diesel tractors that require collectivized or agribusiness-style farming.





## **Technology Transfer and Appropriate Technology...**

Appropriate technology also implies that the technology should contribute to and not detract from sustainable development of the host country by providing for careful stewardship of its natural resources and not degrading the environment beyond its carrying capacity. Nor should technology be used to replace large numbers of individually tended small fields by large plantations to grow crops for export, leaving most of the erstwhile farmers jobless and without a source of home grown food.

The word appropriate is vague until we answer the questions, appropriate to what, and in what way?<sup>6</sup> Answering those questions immediately invokes values about human needs and environmental protection, as well as facts about situations, making it obvious that *appropriate* is a value-laden term. In this broader sense, the appropriate technology might sometimes be small-, intermediate-, or large-scale technology. Appropriate technology is a generic concept that applies to all attempts to emphasize wider social factors when transferring technologies. As such, it reinforces and amplifies our view of engineering as social experimentation.

With these distinctions in mind, let us turn to a classic case study illustrating the complexities of engineering within multinational settings.

# Bhopal Case



Union Carbide in 1984 operated in 37 host countries in addition to its home country, the United States, ranking 35th in size among U.S. corporations. On December 3, 1984, the operators of Union Carbide's plant in Bhopal, India, became alarmed by a leak and overheating in a storage tank. The tank contained methyl isocyanate (MIC), a toxic ingredient used in pesticides. As a concentrated gas, MIC burns any moist part of bodies with which it comes in contact, scalding throats and nasal passages, blinding eyes, and destroying lungs.  
(a burn to the skin)

Within an hour the leak exploded in a gush that sent 40 tons of deadly gas into the atmosphere.<sup>7</sup> The result was the worst industrial accident in history: 500,000 persons exposed to the gas, 2,500 to 3,000 deaths within a few days, 10,000 permanently disabled, 100,000 to 200,000 others injured (the exact figures will always be disputed).

## **Bhopal . . .**

The government of India required the Bhopal plant to be operated entirely by Indian workers. Hence Union Carbide at first took admirable care in training plant personnel, flying them to its West Virginia plant for intensive training. It also had teams of U.S. engineers make regular on-site safety inspections. But in 1982, financial pressures led Union Carbide to relinquish its supervision of safety at the plant, although it retained general financial and technical control. The last inspection by a team of U.S. engineers occurred that year, despite the fact that the team had warned of many of the hazards that contributed to the disaster.

During the following two years safety practices eroded. One source of the erosion was personnel: high turnover of employees, failure to properly train new employees, and low technical preparedness of the local labor pool. The other source was the move away from U.S. standards (contrary to Carbide's written policies) toward lower Indian standards. By December 1984, there were several extreme hazards, including overloading of the tanks storing the MIC gas and lack of proper cooling of the tanks.

### **Bhopal . . .**

According to the official account, a disgruntled employee unscrewed a pressure gauge on a storage tank and inserted a hose into it. He knew and intended that the water he poured into the tank would do damage but did not know it would cause such immense damage. According to another account, a relatively new worker had been instructed by a new supervisor to flush out some pipes and filters connected to the chemical storage tanks. Apparently the worker properly closed valves to isolate the tanks from the pipes and filters being washed, but he failed to insert the required safety disks to back up the valves in case they leaked.

Either way, by the time the workers noticed a gauge showing the mounting pressure and began to feel the sting of leaking gas, they found their main emergency procedures unavailable. The primary defense against gas leaks was a vent-gas scrubber designed to neutralize the gas. It was shut down (and was turned on too late to help), because it was assumed to be unnecessary during times when production was suspended. The second line of defense was a flare tower that would burn off escaping gas missed by the scrubber. It was inoperable because a section of the pipe connecting it to the tank was being repaired. Finally, workers tried to minimize damage by spraying water 100 feet into the air. The gas, however, was escaping from a stack 120 feet high.

## **Bhopal . . .**

Within two hours most of the chemicals in the tank had escaped to form a deadly cloud over hundreds of thousands of people in Bhopal. As was common in India, desperately poor migrant laborers had become squatters—by the tens of thousands—in the vacant areas surrounding the plant. They had come with hopes of finding any form of employment, as well as to take advantage of whatever water and electricity was available. Virtually none of the squatters had been officially informed by Union Carbide or the Indian government of the danger posed by the chemicals being produced next door to them. The scope of the disaster was greatly increased because of total unpreparedness.



# When in Rome do as the Romans do

## **“When in Rome”**

What, in general, are the moral responsibilities of multinational corporations, such as Union Carbide and General Motors, and their engineers?

One tempting view is that corporations and employees are merely obligated to obey the laws and dominant customs of the host country: “When in Rome do as the Romans do.”

This view is a version of ethical relativism, discussed in Chapter 2, the claim that actions are morally right within a particular society when (and only because) they are approved by law, custom, or other conventions of that society. Ethical relativism, however, is false because it might excuse moral horrors. For example, it would justify horrendously low safety standards, if that were all a country required. Laws and conventions are not morally self-certifying. Instead, they are always open to criticism in light of moral reasons concerning human rights, the public good, duties to respect people, and virtues.

# When in Rome do as the Romans do

What should be the Multinational Corporations Ethics conduct:

- a) *Ethical Relativism*
- b) *Ethical Absolutism*
- c) *Ethical Relationalism*
- d) *Ethical Pluralism*

# When in Rome do as the Romans do

What should be the Multinational Corporations Ethics conduct:

- a) *Ethical Relativism*: The view that **actions are morally right within a particular society** when (and only because) they are approved by law, custom, or other conventions of the society.
- b) *Ethical Absolutism*: The view argues that **one should retain precisely the same practices endorsed at home**, never making any adjustments to a new culture: whatever is morally true in one place should be morally true everywhere else.



# When in Rome do as the Romans do

- c) *Ethical Relationalism*: this view argues that moral judgments **should be made in relation to factors that vary from situation to situation**, which makes it impossible to formulate rules that are both simple and absolute. Foreign customs are certainly relevant but they are not decisive in determining what to do in a particular situation.
- d) *Ethical Pluralism*: this view is consistent with the previous one (relationalism, or contextualism) in that it argues that **there is more than one justifiable moral perspective**, and a number of morally permissible variations in formulating, interpreting, and applying basic moral principles.

# International Rights

If moral values are open to alternative interpretations are there nevertheless some minimal standards that must be met? Let us respond to this question within the framework of rights ethics, which is the most commonly applied ethical theory in making cross-cultural moral judgments. A human right, by definition, is a moral entitlement that places obligations on other people to treat one with dignity and respect. If it makes sense at all, it makes sense across cultures, thereby providing a standard of minimally decent conduct that corporations and engineers are morally required to meet.

# International Rights

How can this general doctrine of human rights be applied practically, to help us understand the responsibilities of corporations doing business in other countries? Thomas Donaldson formulates a list of “international rights,” human rights that are implied by, but more specific than, the most abstract human rights to liberty and fairness. These international rights have great importance and are often put at risk. Their exact requirements must be understood contextually, depending on the traditions and economic resources available in particular societies. Just as “ought implies can,” rights do not require the impossible, and they also apply only within structured societies that provide a framework for understanding how to fairly distribute the burdens associated with them.

Donaldson suggests there are 10 such international rights.<sup>8</sup>  
( human rights )

1. The right to freedom of physical movement.
2. The right to ownership of property.
3. The right to freedom from torture.
4. The right to a fair trial.
5. The right to nondiscriminatory treatment (freedom from discrimination on the basis of such characteristics as race or sex).
6. The right to physical security.
7. The right to freedom of speech and association.
8. The right to minimal education.
9. The right to political participation.
10. The right to subsistence. The action or fact of maintaining or supporting oneself at a minimum level.

Donaldson suggests there are 10 such international rights.<sup>8</sup> . . .

These are human rights; as such they place restrictions on how multinational corporations can act in other societies, even when those societies do not recognize the rights in their laws and customs. For example, the right to nondiscriminatory treatment would make it wrong for corporations to participate in discrimination against women and racial minorities even though this may be a dominant custom in the host country. Again, the right to physical security requires supplying protective goggles to workers running metal lathes, even when this is not required by the laws of the host country.

Although these rights have many straightforward cross-cultural applications, they nevertheless need to be applied contextually to take into account some features of the economy, laws, and customs of host countries. Not surprisingly, many difficulties and gray areas arise. One type of problem concerns the level of stringency required in matters such as degrees of physical safety at the workplace. Workers in less economically developed countries are often willing to take greater risks than would be acceptable to workers in the United States.

Workers in less economically developed countries are often willing to take greater risks than would be acceptable to workers in the United States. Here Donaldson recommends applying a “rational empathy test” to determine if it is morally permissible for a corporation to participate in the practices of the host country: Would citizens of the home country find the practice acceptable if their home country were in circumstances economically similar to those of the host country? For example, in determining whether a certain degree of pollution is acceptable for a U.S. company with a manufacturing plant located in India, the U.S. company would have to decide whether the pollution level would be acceptable under circumstances where the United States had a comparable level of economic development.

A second, quite different, type of problem arises where the practice is not so directly linked to economic factors, as in racial discrimination. Here Donaldson insists that unless one can do business in the country without engaging in practices that violate human rights, then corporations must simply leave and go to other countries.

Finally, the appeal to human rights is the most powerful cross-cultural ethical theory, but it is not the only one. All major ethical theories, including duty ethics and utilitarianism, rely on a conception of the worth and dignity of human beings. It is true that not all societies are based on ideals of individual liberty and the sanctity of life. Nevertheless, a valid cross-cultural ethics need not assume that all societies have come to appreciate all important values. Just as important, at some minimum level, all cultures share some common values, including bans on gratuitous violence and requirements of mutual support, reciprocity, and fairness—if they did not, they would not exist.<sup>9</sup> How these basic values are understood varies considerably, but they provide a basis for meaningful cross-cultural moral dialogue.

- Human rights is the most powerful value across-cultural ethical theory. All ethical theory rely on a conception of the worth and dignity of human beings.
- Not all societies are not based on ideals of individual liberty and sanctity of life.
- A valid cross-cultural ethics (does not assume that all society have to appreciate all important values however all culture share some common values such fairness and mutual support



# Promoting Moral Just Measures

Richard T. De George agrees that multinational corporations should respect the basic rights of people in the countries where they do business, but he requires more, especially when wealthy countries do business in less economically developed countries. In the spirit of utilitarianism, which calls for promoting the most good for the most people, he also requires that the activities of multinational corporations benefit the host countries in which they do business.<sup>10</sup>

More fully, the business activities of multinational corporations must do more overall good than bad, which means helping the country's overall economy and its workers, rather than benefiting a few corrupt leaders in oppressive regimes. Not only must they pay their fair share of taxes, but they must make sure the products they manufacture or distribute are not causing easily preventable harms.



In addition, the overall impact of the business dealings must tend to promote morally just institutions in the society, not increase unjust institutions. At the same time, corporations should respect the laws and culture of the host country, providing they do not violate basic moral rights. Of course, there is a tension between promoting just institutions and respecting local customs. For example, as U.S. business attempts to encourage a move toward treating women equally in the workplace, they may undermine local customs, often supported by religion, about the appropriate roles for women. Good judgment exercised in good faith, rather than abstract principles, is often the only way to address such practical dilemmas.

De George calls for a contextual, case-by-case approach in applying principles of human rights and promoting the good of the host country. For example, what is a “fair wage” to workers in very poor countries? If multinational corporations pay exactly the pay rate of the host country, they will be accused of exploiting workers, especially when that rate is below a living wage sufficient for the person to live with dignity as a human being. If they pay well beyond that rate they will be accused of unfairly stealing the most skilled workers in the society, drawing them away from other companies important to the local economy. De George’s guideline is to pay a living wage, even when local companies fail to pay such a wage, but otherwise pay only enough to attract competent workers.

As another example, consider the issue of worker safety in companies that manufacture hazardous chemicals. When is it permissible for the United States to transfer dangerous technology such as asbestos production to another country and then simply adopt that country's safety laws? Workers have the right to informed consent. Even if the host country does not recognize that right, corporations are required to inform workers, in language they can understand, of the dangers. That is a necessary, but not sufficient condition. Workers may be so desperate for income to feed their families that they will work under almost any conditions. Corporations must eliminate great risks when they can while still making a reasonable profit. They must also pay workers for the extra risks they undertake. Exactly what this means is a matter of morally good judgment and negotiation.

## **Discussion Questions**

1. Following the disaster at Bhopal, Union Carbide argued that officials at its U.S. corporate headquarters had no knowledge of the violations of Carbide's official safety procedures and standards. This has been challenged as documents were uncovered showing they knew enough to have warranted inquiry on their part, but let us assume they were genuinely ignorant. Would ignorance free them of responsibility?

2. The moving of hazardous technologies, such as the manufacture of asbestos, to less-developed countries is motivated in part by cheaper labor costs, but another factor is that workers are willing to take greater risks. How does Donaldson's view apply to this issue?

Also, do you agree with Richard De George's view that taking advantage of this willingness need not be unjust exploitation if several conditions are met: (1) Workers are informed of the risks. (2) They are paid more for taking the risks. (3) The company takes some steps to lower the risks, even if not to the level acceptable for U.S. workers.<sup>11</sup>

How would you assess Union Carbide's handling of worker safety? Take into account the remarks of an Indian worker interviewed *after* the disaster. The worker was then able to stand only a few hours each day because of permanent damage to his lungs. During that time he begged in the streets while he awaited his share of the legal compensation from Union Carbide. When asked what he would do if offered work again in the plant knowing what he knew now, he replied: "If it opened again tomorrow I'd be happy to take any job they offered me. I wouldn't hesitate for a minute. I want to work in a factory, any factory. Before 'the gas' [disaster] the Union Carbide plant was the best place in all Bhopal to work."<sup>12</sup>

- 3.** How would you balance respect for diversity with commitments to respect for individual rights in the following two cases?
  - a.** You are a woman assigned to work in a Middle Eastern country that requires women to wear traditional clothing, but doing so conflicts with your religious faith; or, you are a man who is a member of a team whose members include women who are required to wear traditional clothing. If you decline the assignment, your career advancement might suffer.
  - b.** Your company is asked to design a more efficient weaving apparatus whose size is quickly adjustable to young children, and you are assigned to the project. You know that the primary market for the apparatus is countries that use child labor.

# Conclusion

- A human right is a moral entitlement that places obligations on other people to treat one with dignity and respect which is a cross cultural moral judgment.