

A TOURIST PROBLEM

I

Marvin Johnson is Environmental Engineer for Wolfog Manufacturing, one of several local plants whose water discharges flow into a lake in a flourishing tourist area. Included in Marvin's responsibilities is the monitoring of water and air discharges at his plant and the periodic preparation of reports to be submitted to the Department of Natural Resources.

Marvin has just prepared a report that indicates that the level of pollution in the plant's water discharges slightly exceeds the legal limitations. However, there is little reason to believe that this excessive amount poses any danger to people in the area; at worst, it will endanger a small number of fish. On the other hand, solving the problem will cost the plant more than \$200,000.

Marvin's supervisor, Plant Manager Edgar Owens, says the excess should be regarded as a mere "technicality," and he asks Marvin to "adjust" the data so that the plant appears to be in compliance. He explains: "We can't afford the \$200,000. It might even cost a few jobs. No doubt it would set us behind our competitors. Besides the bad publicity we'd get, it might scare off some of tourist industry, making it worse for everybody."

How do you think Marvin should respond to Edgar's request?

II

No doubt many people in the area besides Marvin Johnson and Edgar Owens have an important stake in how Marvin responds to Edgar's request. How many kinds of people who have a stake in this can you think of? [E.g., employees at Wolfog.]

III

Deborah Randle works for the Department of Natural Resources. One of her major responsibilities is to evaluate periodic water and air discharge reports from local industry to see if they are in compliance with antipollution requirements. Do you think Deborah would agree with the Plant Manager's idea that the excess should be regarded as a "mere technicality"?

IV

Consider the situation as local parents of children who swim in the lake. Would they agree that the excess is a "mere technicality"?

V

A basic ethical principle is "Whatever is right (or wrong) for one person is right (or wrong) for any relevantly similar persons in a relevantly similar situation." This is called the **principle of universalizability**. Suppose there are several plants in the area whose emissions are, like Wolfog Manufacturing's, slightly in excess of the legal limitations. According to the principle of universalizability, if it is right for Marvin Johnson to submit an inaccurate report, it is right for all the other environmental engineers to do likewise (and for their plant managers to ask them to do so). What if all the plants submitted reports like the one Edgar Owens wants Marvin Johnson to submit?

VI

Now that you have looked at the situation at Wolfog from a number of different perspectives, has your view of what Marvin Johnson do changed from your first answer?

[This case is an adaptation of "Cover-up Temptation," one of several short scenarios in Roger Ricklefs, "Executives Apply Stiffer Standards Than Public to Ethical Dilemmas," The Wall Street Journal, November 3, 1983.]

COMMENTARIES

Kenneth L. Carper

It is interesting to notice the language people use to justify unethical behavior. Plant Manager Edgar Owens refers to overlooking "mere technicalities," when he really means breaking established laws. He requests Marvin Johnson to "adjust" the report, when he really intends for Johnson to falsify scientific data.

The falsification of data is viewed by scientists and engineers to be an extremely serious breach of ethics. Marvin Johnson is being asked to compromise one of the most important moral concepts in science, truthfulness in reporting of scientific measurements. Should he consent to a false report, and should the incident come to light, his own personal career will be in grave jeopardy. The scientific and engineering community cannot survive unless its members can trust one another to present data truthfully.

Yet, Marvin Johnson finds himself in a very difficult position. His manager has raised the question of loyalty. The implication is that truthfulness will damage the company; fellow employees will suffer. Competitors will profit at the expense of Wolfog Manufacturing. The arguments given by Edgar Owens can be quite persuasive, and they are all too familiar in the corporate setting (Nelson and Peterson 1982). Regulations are often seen to be unrealistic or arbitrary. The assumption is often made that competitors must be falsifying data to meet these unrealistic expectations, so it is only wise business practice to do what everyone else is doing.

Much has been written about the pitfalls of misguided loyalty. While principled loyalty can be a commendable virtue, misguided loyalty has been responsible for many, many tragic moral disasters. When loyalty to a corporation, or a government, or an individual, requires the sacrifice of fundamental moral principles, such loyalty is not a virtue.

Engineers who find themselves in stressful situations like this should refer to their professional Code of Ethics. This can be a helpful, tangible tool in negotiations with their employers. (Carper 1991, Davis 1991). Certain fundamental ethical principles are embodied in the Codes of Ethics adopted by professional societies, and the embattled engineer can point to these principles, stating that his or her career as an engineer requires adherence to these principles. What Johnson is being asked to do is a violation of the canons of his profession.

The principle of universalizability is introduced in this case study. Immanuel Kant's "categorical imperative" provides this guidance:

Act only according to that maxim by which you can at the same time will that it should become a universal law.

In this case, Johnson should not write an "adjusted report" unless he is truly willing to accept similar actions by all his colleagues in the scientific and engineering community when confronted by similar situations and similar

pressure from their employers. Should Johnson consent to Edgar Owens' request, later self-analysis of his actions will bring the crisis of conscience experienced by others who have compromised their values in the interest of misguided loyalty.

One relevant example is the B. F. Goodrich case involving data falsification on critical brake and wheel assembly testing for Air Force attack aircraft (Martin and Schinzinger 1989, p.58). The firsthand account provided by Kermit Vandiver, a B. F. Goodrich employee, is very enlightening (Vandiver 1972).

Deborah Randle, the engineer who works for the Department of Natural Resources, will most certainly evaluate reports from the various corporations with the principle of universalizability in mind. How else can someone charged with global responsibility operate, and remain impartial? False data will be absolutely unacceptable to Randle. Again, engineers simply must be able to trust each other.

Should an unethical report be discovered, not only will Johnson's reputation be irreparably damaged, but the impact on Wolfog Manufacturing will also be significant. The case of emissions test data falsification by the Ford Motor Company shows the damage such behavior can do to a corporation (Martin and Schinzinger 1989, pp. 163164). A review of the Ford case illustrates the fact that compromising ethics in the interest of loyalty can actually result in great damage to the very employer one is trying to protect.

It seems that Marvin Johnson has some thinking to do. It is probably not yet time to "blow the whistle" publicly. There are some moral principles and procedures involved in proper whistleblowing, and Johnson has not yet exhausted his avenues within the corporation (Elliston et al 1985). Indeed, Johnson has an excellent opportunity to provide some moral leadership to his colleagues by speaking out on the issue of scientific truthfulness. But engineers simply must refuse to work for corporations that place profit above scientific honesty. If Edgar Owens represents the moral stature of the Wolfog corporate management, then Wolfog Manufacturing is not a healthy environment for an honest engineer.

Suggested Readings:

1. Carper, Kenneth L. 1991. "Engineering Code of Ethics: Beneficial Restraint on Consequential Morality," Journal of Professional Issues in Engineering Education and Practice, American Society of Civil Engineers, New York, NY, Vol. 117, No. 3, July, pp. 250257.
2. Davis, Michael 1991. "Thinking Like an Engineer: The Place of a Code of Ethics in the Practice of a Profession," Philosophy and Public Affairs, Princeton University Press, Princeton, NJ, Vol. 20, No. 2, Spring, pp. 150167.
3. Elliston, Frederick, J. Keenan, P. Lockhart and J. van Schaick 1985. Whistleblowing Research: Methodological and Moral Issues, Praeger Publishers, New York, NY, pp.133161.
4. Martin, Mike W. and R. Schinzinger 1989. Ethics in Engineering (2nd edition), McGrawHill, Inc., New York, NY, pp. 58, 163164, 176.
5. Nelson, C. and S. R. Peterson 1982. "The Engineer as Moral Agent," Journal of Professional Issues in Engineering, American Society of Civil Engineers, New York, NY, Vol. 108, No. 1, January, pp. 15.
6. Vandiver, Kermit 1972. "Why Should My Conscience Bother Me?" from In the Name of Profit, by Robert L. Heilbroner, Doubleday and Company, Inc., Garden City, NY, pp. 331.

Joseph Ellin

I

This case involves a violation of environmental regulations which may be more 'technical' than real. Wolfog Co is faced with \$200,000 unnecessary expenses to prevent small excess omissions which are not believed to be harmful to anyone but a few fish. The obvious course here is for Wolfog to apply to the DNR for a variance. Their lawyers can try to convince the DNR that the slight excess poses little danger. If they don't get the variance, they'll have to conform, or go to court; though all this will probably cost Wolfog more than the cost of compliance.

However there's nothing to be done on an individual basis. Manager Edgar Owens should not expect engineer marvin to 'adjust' the data and Marvin shouldn't do it. Edgar's reasoning is self-serving: if he's worried about image and tourism he should comply with the regulations. It may well be true that if Wolfog has to spend the \$200,000 which they can't afford, they're in trouble, but the answer, if there is an answer, is not to fake data.

II

This might be one of those cases in which most people are better off if the law is violated rather than obeyed. Such situations are probably more common than realized. It's not the discharge itself which does any harm, but the fact that it's not in conformity to the regulations, since this creates the image problem and scares away the tourists. This obviously makes an excellent case for loosening the regulations: regulations should not be more onerous than necessary to achieve their purpose. The more people who have a stake in economic development, the more likely is this case to be heard by the authorities.

III

Whether Deborah, the DNR water quality official, would agree that the violation is a 'mere technicality,' depends on Deborah. We don't know enough about her; if she's a radical environmentalist, she thinks zero dead fish is the only tolerable condition, and no cost is too great to achieve it. She also may think there is no such thing as a technical violation: a violation is a violation, may be her enforcement motto. One might take the view that if she thinks this, she shouldn't be in her position, but perhaps her boss thinks so too. Perhaps this is the motto of the entire DNR, which if it is shows something about the irrationality we've gotten ourselves into.

IV

Would the parents agree that the violation is merely technical? Probably not; the local parents have been whipped up by the environmentalists and the media to think that any drop of anything is dangerous. They want jobs, economic progress, low taxes, low prices, and a pristine environment as well, (who doesn't?) and they are not willing or able to understand the issues involved. And they vote.

V

So given this hypothetical gloomy situation, is the over-all best solution that Marvin should just fake the data? One might make such an argument from a narrow act utilitarian point of view, but for all sorts of reasons including long-range utility it isn't right for anyone to submit a fake report, so the question whether everyone might do so is purely hypothetical. Another question would be, if it's right to grant a variance to Wolfog, is it right to grant a variance to every plant? And the answer would be yes, which is not an argument not to grant the variance

to Wolfog, unless there is a comparable compelling reason at the other industries (for example, it might not cost everybody \$200,000 to clean up). If there is, then the DNR is within its rights in denying the variance. If all the factories together produce a total discharge that is dangerous, the situation changes by that fact. But if there are no other plants in Wolfog's situation, then the so-called principle of universalizability should not be used as an excuse to impose hardships on one firm without any compensating gain for anyone except the few fish.

VI

Marvin shouldn't fake the data. The rest is up to the people at Wolfog.