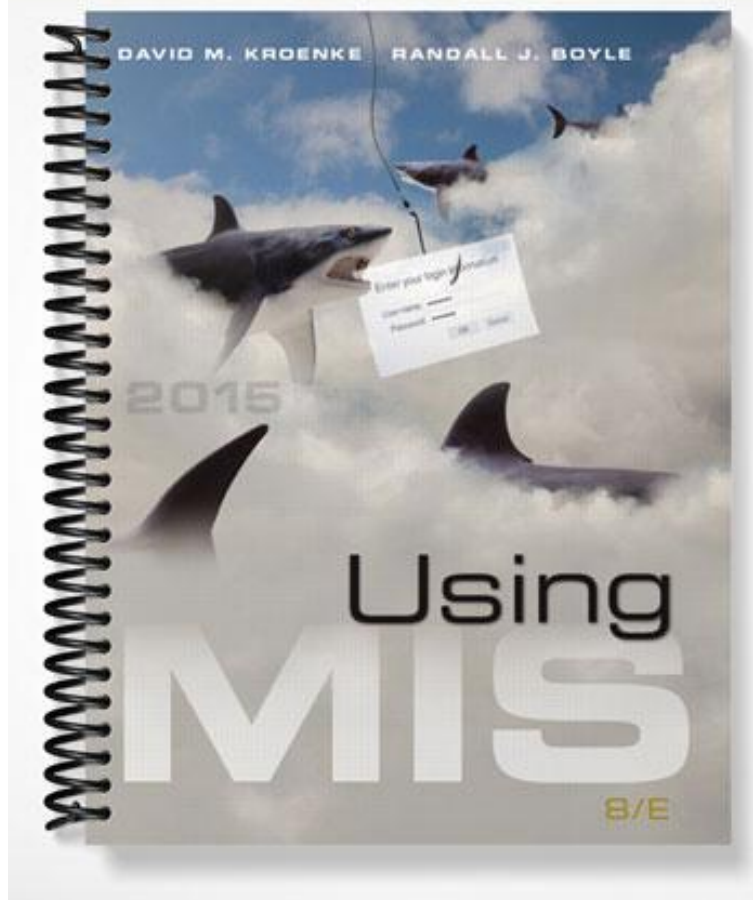


# SOLUTIONS MANUAL



## AllRoad Parts, Chapter 2

### GOALS

Use AllRoad Parts to:

- Show a typical collaboration project in business.
- Illustrate a dysfunctional meeting.
- Demonstrate problems of irregular meeting attendance.
- Show some of the disadvantages of face-to-face meetings.
- Show some of the disadvantages of a group's use of email.

### BACKGROUND AND PRESENTATION STRATEGIES

1. AllRoad Parts needs to investigate whether it wants to use 3D printing to manufacture some parts. Kelly asked some of AllRoad's key employees to identify ways of saving costs.
2. Felix has his own way of doing things, and if it isn't convenient to attend a meeting, he doesn't attend. That puts him behind in the group's discussion, which aggravates the rest of the team.
3. This face-to-face meeting illustrates the need for collaboration IS...group members need not meet face to face—or even at the same time. An associate at Microsoft tells me that Microsoft has almost given up on face-to-face training for its employees. “It's not the expense. It's the fact that as soon as the training starts, someone's cell phone buzzes and that person leaves the room. They come back for 10 minutes, and then it rings again.” The scenario here illustrates that problem.
4. As discussed in the chapter, email is a poor way to share group results.
5. This chapter has been written to encourage students to build their own collaboration IS...as practice for understanding IS components and also to obtain a system they can use. They can begin using MIS today...they don't have to wait until they enter business.

### HOW TO GET STUDENTS INVOLVED

1. Ask students if they have attended student group meetings like this one. How have they responded? What do they do about a team member who doesn't attend the meetings?
2. Felix is concerned about costs but missed earlier discussions.
  - Have you ever been to a meeting where someone wants to go over ground you covered in an earlier meeting?
  - What did you do?
  - If this team wastes, say, a half-hour bringing Felix up to speed, how much labor cost is wasted? Assume their burdened labor rate is \$50 an hour.
  - Meetings are incredibly expensive. Making them more efficient is a big, but silent, cost saving.
3. Felix was unable to open the email attachment (if, in fact, he even read the email).
  - Have you had this experience with your groups?
  - What does the text say about using email for groups?
  - What alternatives for sharing documents exist?

4. Not all meetings need to be face to face.

- Does this team need to meet face to face? Why or why not?
- Under what conditions are face-to-face meetings required?
- Do your team meetings need to be face to face? Why or why not?
- What IS can you use for your student teams?

## **BOTTOM LINE**

- Face-to-face meetings have serious costs. Requiring everyone to be in the same place at the same time is expensive and aggravating.
- IS can greatly facilitate virtual meetings.
- Possibly, your default should be that all meetings are virtual...only special meetings need to be face to face.

## Using the Ethics Guide: I Know What's Better, Really

(pages 56–57)

### GOALS

- Introduce a second perspective for assessing the ethics of behavior: utilitarianism.
- Ask students to assess the ethics of taking advantage of a coworker's absence.
- Compare and contrast the results of two different ethical perspectives.

### BACKGROUND AND PRESENTATION STRATEGIES

The primary purpose of this guide is to introduce utilitarianism. It and Kant's categorical imperative are used in all the guides in the following chapters. The principal guideline that is used for utilitarianism here is "Does the act result in the greatest good to the greatest number?" This is not, by the way, the same as saying, "Does the act avoid the most pain for the most people?"

One of the problems of utilitarianism is that human rationalization is so flexible that it seems possible to use it to justify about anything, if one is willing to work hard enough at it. This characteristic can be used with students, however, to flesh out lots of different perspectives about an act in class discussions.

I posed the problem of using utilitarianism to justify anything to Chuck Yoos, emeritus professor from the U.S. Air Force Academy and career teacher of ethics. He replied that it's a calculation, not unlike cost-benefit analysis. Here is his full response:

Here is Bentham's poetic version of the dimensions of a utilitarian "calculation":

"Intense, long, certain, speedy, fruitful, pure—  
Such marks in pleasures and in pains endure.  
Such pleasures seek, if private be thy end:  
If it be public, wide let them extend.  
Such pains avoid, whichever be thy view:  
If pains must come, let them extend to few."

1. Intensity
2. Duration

3. Certainty or uncertainty
4. Propinquity or remoteness
5. Fecundity
6. Purity

From time horizon to span of effects, I agree that it may be problematic and opportune. Nevertheless, don't businesses still do cost-benefit analyses, albeit with more narrow scope? Perhaps what I'm thinking, "because we can't do it perfectly means we can't or shouldn't do it?" Of course, it must be addressed genuinely, sincerely, forthrightly, with no attempt to "rationalize" an outcome already preferred on perhaps personal, selfish grounds.

I believe it is worthwhile to juxtapose Kant's categorical imperative ("Act as though you would will your act to be a universal law") with utilitarianism ("Greatest good for the greatest number"). Often Kant's perspective is more conservative, but not always, as students will see in different Ethics Guides in the chapters that follow. A corollary for the categorical imperative is sunshine: Are you willing to tell everyone involved exactly what you're doing? (The converse isn't true, however. There can be times when you don't tell others what you're up to because of legitimate proprietary interests.)

Unlike the categorical imperative, utilitarianism will often bring the various players in the matter to light, and then sunshine can be used to ask, "Are you willing to tell them?" Thus, in the current guide, would you be willing to tell Leslie what you're doing? Probably not, and not to protect proprietary data. But, on the other hand, one can make the argument that your actions are better for the company...you don't confuse the committee with Leslie's ideas, and so forth. So, considering everyone involved, maybe you should tell Leslie what you did and explain why. Would doing so make your act ethical from either perspective? All good fodder for discussion.

By the way, many flavors of utilitarianism exist that differ on whether it is the intended consequences or the actual consequences that matter in judging ethics. Question 4 raises that issue directly.

One last observation: Using both perspectives together may raise inconsistencies and lead away from any definitive answer, which will drive some students crazy. I think their response is just a signal of their current level of cognitive development, and their frustration leads to richer learning, or at least it can. Sometimes I've found it worthwhile to have the more mature thinkers in the class explain, in their own words,

that often there isn't one single answer to a question, and quite often that's beneficial, if confusing.



## SUGGESTED RESPONSES FOR DISCUSSION QUESTIONS

1. It seems very difficult to claim that your action should be a universal law . . . and you're unlikely to want to tell everyone involved. I'd say not ethical.
2. Does it result in the "Greatest good for the greatest number"? Lots of perspectives to consider. This should result in a good class discussion. And should your action be judged by your intent? Or by what happened? Students will assume one or the other and then be asked to admit which they assumed in question 3.
3.
  - a. It doesn't make your actions more ethical considering the categorical imperative. Regarding utilitarianism, it helps.
  - b. Considering the categorical imperative, your action is unethical, regardless of outcome. Regarding utilitarianism, it would seem to make it less ethical. But, again, should your actions be judged by what you intended or by what resulted?
4. No answer, not even among the philosophers. Just perspectives to consider.
5. I don't think the ethics here are any different than for presenting only one alternative.
  - a. Not ethical.
  - b. The answer depends on the answer to question 4. Again, there are multiple perspectives.
6. Is this a consequence that anyone considered in answering question 2? In terms of the "greatest good for the greatest number," much value to the company may have been lost by your damaged relationship with Leslie. From a utilitarian perspective, this possibility makes your actions less ethical . . . whether one uses what you intended to happen or what did happen as the operative criterion.
7. Is there any reason to do this other than to be able to say to Leslie that you did present both ideas? I don't think this changes any of the ethical considerations from either perspective. Maybe there is some likelihood that you preserve your relationship with Leslie, which eliminates the possible loss of value to the company of the two of you working together.
8. Should be some interesting responses here. I hope for strong disagreement in the class and a spirited discussion!

## WRAP UP

- Now we have two ethical perspectives to consider: Kant's categorical imperative and utilitarianism.
- Using utilitarianism, should you judge the ethics of your behavior on the basis of what you intend or what occurs? If the latter, are you becoming a gambler with your ethics?
- Often, there can be different perspectives and answers to a question. There isn't always a "right answer." What will you do when that happens?

## Using the Security Guide: Securing Collaboration (pages 68–69)

### GOALS

- Raise students' awareness of security risks and potential problems when using collaboration software.
- Understand the risks to organizational data when data is shared with nonemployee personnel.
- Learn differences in security capabilities of Google Drive, Microsoft OneDrive, and Office 365.

### BACKGROUND AND PRESENTATION STRATEGIES

Collaboration tools enhance collaboration but introduce serious security risks. The more people who have access to data, the greater the likelihood of data loss. For example, if the probability that any single person uses data in only authorized ways is 0.99 and the group has three people, the probability that everyone in the group uses data only in authorized ways falls to 0.97 (assuming equal probability and independent events). However, if the group has 50 people, the probability that everyone in the group uses data in authorized ways falls to 0.61. This change occurs simply because with more people, there is more chance that someone will use the data inappropriately.

Now, there is always risk in sharing data. If I attach a document with confidential data to an email and send it to a large group of people, I am exposing that confidential data to considerable risk. However, it is just one document. Suppose, instead, that I place numerous documents, schedules, tasks, and sketches on a Microsoft OneDrive site and open that site to a large number of people. I am exposing that semantically linked group of documents to considerable risk. In some ways, the risk of sharing a OneDrive site is greater than sharing a file server. Most file servers have so many documents that it can be difficult to find everything about some topic. All of the documents on a team site, however, contain data of interest to the purpose of the team. Critical documents have been centralized in one spot.

The problem of sharing confidential data with outsiders is not new. However, the problem of sharing an entire team's document set with outsiders is new. Again, the consequences may be higher because there are many documents, all with a similar purpose.

Of the three collaboration tools presented in this chapter, SharePoint has the potential for the most security. It has only the *potential* for the most security because the features and functions for excellent security are in the product, but it is incumbent on those who set up the SharePoint server and sites to create and implement security.

However, the adage "a chain is only as strong as its weakest link" pertains to document security. Documents can be highly protected on a SharePoint site, but if legitimate SharePoint users download that data to a Microsoft OneDrive site or to a Google Drive site, then the security enforced by SharePoint may have been overcome.

Digital rights management is a means of restricting the use of Microsoft Office documents. With it, the content of documents can be restricted to viewing by particular people or for particular periods of time and in other ways. This technology, however, is seldom used and has numerous holes.

The bottom line: Sharing confidential documents in team sites exposes those documents to increased security risks. This risk increases dramatically with employees' use of personal mobile devices. The IS department has little to no control over their use, and it is presently unclear how organizations can deal with security breaches via personal devices.



### SUGGESTED RESPONSES FOR DISCUSSION QUESTIONS

1. When using a public wireless network, you should assume that any email you send or any IM message you write can be published on the front page of your campus newspaper tomorrow. Write only what you are willing to have published.
2. The financial exposure is much higher for businesses than for individuals. Again, any email or IM sent over a public wireless network is open and can be read by anyone. If you

are using, say, Google Drive, to share accounting data with one of your clients over a public wireless network, you are exposing that data to snooping. Do not transmit sensitive data over a public wireless network.

3. Employees who process work emails on gmail are exposing the content of those emails over the public Internet. Even if the employee is working inside the corporate network and even if that network is secure, as soon as the email goes on to the public Internet, it is vulnerable to snooping. If no public wireless network is used, then the snooper would have to physically tap into a wired network, which is much harder than wireless snooping, but it is still a possibility.

More important, gmail is free software, and Google severely limits its liability for the quality of the product or service. Of course, Google would suffer an enormous public relations loss were its email servers to be compromised or lost, but, even still, any employee who stores company email on a gmail server (and you cannot use gmail without doing so) is exposing the company's data to the security policy established by Google. The company may or may not determine that to be an acceptable risk, but when employees do this on their own, their companies do not even know. It is a messy issue with no clear solution (or barrier).

4. Organizations have no control over the ways that SharePoint Online (part of Office 365) sites are shared. An employee could store sensitive data on a SharePoint Online site and inadvertently share that site publicly or share it inappropriately. An employee might give update permission to someone who has no authority to make updates. Partners could copy sensitive data from a SharePoint Online site and send it to competitors. Furthermore, the organization has no control over how Microsoft treats the data on its site. Microsoft could be hacked and lose data, and, absent gross carelessness, the organization that lost the data would have no recourse. Ironically, ease of use is the culprit here. Both Google Drive and SharePoint Online are readily accessible and quite easy to use. This means that employees with less knowledge of the risks of sharing can

easily use these services. Consider, too, that employees can be accessing Google Drive or SharePoint Online using their own iPhones or iPads, using network access that is paid for by the employee. The organization has no control over such use. *It is not much ado about nothing.* Organizations today have serious challenges to security in these services.

5. The risks of using SharePoint Online or Google Drive are no greater than the risks of using any file server. Few organizations today would disallow file servers, and thus few would be likely to disallow SharePoint Online or Google Drive on this same basis. In general, it is very difficult to enforce the prohibition of using particular programs. Even if the employees cannot install software on their work computers, they can install it on their own computers and copy data from the work computers to their home computers.

Chapter 12 discusses these issues in more detail. In general, it is cheaper and easier to perform security background checks on employees in sensitive positions and to train those employees on security policy than it is to prohibit employees from using certain software. With the numerous computing alternatives available today, employees can usually find a way around some prohibition if they are sufficiently motivated.

## WRAP UP

- Collaboration software opens the door to security risks. Always think about security when you set up a team site. Realize that team members can always remove data to other locations and process it or transmit it elsewhere without your knowledge.
- Sharing data with nonemployees is risky. Sharing Google Drive or SharePoint Online sites with outsiders is even more risky because many related files and documents are consolidated at a single location.
- Organizations have a serious security vulnerability from employees' use of personal mobile devices such as iPhones, iPads, Android phones, and the like. Education and training of employees are crucial!



## Using the Guide: Egocentric Versus Empathetic Thinking

(pages 70–71)

### GOALS

- Raise the level of professionalism in the class.
- Explore empathetic thinking and discuss why it's smart.
- Discuss two applications of empathetic thinking.
- Emphasize that a problem is a perception and that perceptions differ among people.
- Discuss that different problem perceptions require different information systems.

### BACKGROUND AND PRESENTATION STRATEGIES

How many times have we all been asked, "I couldn't come to class, did we do anything important?" I'm always tempted to say, "No, when I saw you weren't here, I took all the important material out." Another rejoinder, more mature on my part is, "Well, first tell me what you think important material is." If they say, "Is it going to be on the test . . .?" then we have some talking to do.

You might want to underline the corollary about not asking your boss, when you've missed a meeting, "Did we do anything important?"

Part of the reason for this guide is to raise the level of professionalism in the class. I find students' maturity rises to meet expectations. By asking them to engage in empathetic thinking with regard to not coming to class, I'm also asking them to step up in their maturity:

- If you choose not to come to class, that's your choice. But realize there's a cost to me and our teaching assistants, and do what you can to minimize that cost.

Empathetic thinking does result in better relationships, but this guide says that businesspeople should engage in it because it's smart. Negotiators, for example, need to know what

the other side wants, what's important to it, what issues they can give on, and what ones are nonnegotiable.

Here's a simple example:

- Suppose you have an employee who wants more recognition in the group. You know the employee is doing a good job, and you want to reward her. Not engaging in empathetic thinking, you give her a pay raise. What have you done?
- How could empathetic thinking have helped you in this situation?

So, using this example, just what is empathetic thinking?

- Understanding the other person's perspective.
- Realizing that people who hold a perspective different from yours are not necessarily *wrong* (but you don't have to be wrong, either).
- Not attempting to convince the other person that his or her perspective should be changed to match yours.
- Adapting your behavior in accordance with the other person's perspective.
- Does thinking empathetically mean that you change your way of thinking to match the other person's?

(No.)

- Does it mean always giving the other person what he or she wants?

(No.)

- What are different ways you could adapt your behavior in accordance with another person's perspective?

All of us have been in meetings that are going nowhere. Whenever we find ourselves in such a meeting, is the problem due to different perspectives? If so, one can sometimes find the root cause by engaging in empathetic thinking.

The scenario at the end of the guide is right on point. If three factions hold three different problem definitions and if they don't realize they hold those different definitions, then the meeting will go nowhere. And it doesn't matter what the "facts" are. The facts aren't the problem; the different problem definitions are.





## SUGGESTED RESPONSES FOR DISCUSSION QUESTIONS

1. Considering the other person's perspective:
  - What are some examples of egocentric thinking?
  - What are some examples of empathetic thinking?
2. Read the minutes, if there are any. Ask others who were at the meeting. Prior to the meeting, ask someone else to take notes or make a recording. If possible, let your boss know ahead of time that you'll be absent and why. Otherwise, apologize for your absence, explain why, and say that you have the information. Minimize the burden on your boss!
3. A problem is a perception. Different people perceive in different ways. So, different people can have different problems, *even though they may give the same name to the problem.*
4. First, based on her words, the *real problem* is that you know she is not engaged in empathetic thinking. Notice that you are in a much stronger position than she is. You know that there are two (yours and hers), and possibly more, different problem definitions. Unlike her thinking, your thinking is broad and flexible enough to understand that multiple perceptions, and hence multiple problem definitions, can exist at the same time.

You have at least four different strategies: (1) Change your definition to match hers. (2) Try to teach her about empathetic thinking. (3) Without saying anything about her thinking skills and without needlessly repeating your understanding of the problem, use your understanding of her and her definition to arrive at a solution that is mutually acceptable. (4) Say something polite and close the conversation because you're just wasting your time.

- Under what circumstances would you use each of these strategies?

5. Restate his position to him: "You perceive the problem as..." and do the best possible job of restating his position. This does not mean you agree with his position, but it will let him know that you understand his words. He'll know that, if you continue to disagree with him, it's not because you don't understand him.

Having convinced him that you understand his position, you should attempt to express your view of the problem. His knowing that you understand his position may allow him to be able to understand yours. However, he may not be able to, in which case there may be no possibility of good communication with him on this issue.

6. It comes down to power. You are in a much more powerful position if you understand other people's perceptions and your own but they understand only their own. You can imagine solutions and possibilities that they cannot. Also, as countless books on negotiating skills imply, understanding someone else's point of view enables you to manipulate him or her, if you are so inclined.

Finally, empathetic thinking results in better relationships, and in the final analysis, business is nothing but relationships. Businesses themselves do nothing. Business is people working together in relationships. Better relationships equate to better business.

## WRAP UP

Sometimes I end with a little practice:

- Anybody learn anything today? What?
- All right, let's practice. Using empathetic thinking, tell me why you think I included this exercise in today's presentation.