

LAROM

I

A recent graduate of Engineering Tech, Bernie Reston has been employed in the Research and Development (R&D) Chemical Engineering Division of Larom, Inc. for the past several months. Bernie was recommended to Larom as the top Engineering Tech graduate in chemical engineering.

Alex Smith, the head of Bernie's unit, showed immediate interest in Bernie's research on processes using a particular catalyst (call it B). However, until last week, his work assignments at Larom were in other areas.

A meeting of engineers in Bernie's unit is called by Alex. He announces that the unit must make a recommendation within the next two days on what catalyst should be used by Larom in processing a major product. It is clear to everyone that Alex is anticipating a brief, decisive meeting. One of the senior engineers volunteers, "We've been working on projects like this for years, and catalyst A seems to be the obvious choice." Several others immediately concur. Alex looks around the room and, hearing no further comments, says, "Well, it looks like we're in accord on this. Do we have consensus?"

So far Bernie has said nothing. He is not sure what further testing will show, but the testing he has been doing for the past week provides preliminary evidence that catalyst B may actually be best for this process. This is also in line with what his research at Engineering Tech suggested with somewhat similar processes. If catalyst B should turn out to be preferable, a great deal of money will be saved; and, in the long run, a fair amount of time will be saved as well. Should he mention his findings at this time, or should he simply defer to the senior engineers, who seem as determined as Alex to bring matters to closure?

II

Bernie somewhat hesitantly raises his hand. He briefly explains his test results and the advantages catalyst B might provide. Then he suggests that the unit might want to delay its recommendation for another two weeks so that he can conduct further tests.

Alex replies, "We don't have two weeks. We have two days." He then asks Bernie to write up the report, leaving out the preliminary data he has gathered about catalyst B. He says, "It would be nice to do some more testing, but we just don't have the time. Besides, I doubt if anything would show up in the next two weeks to change our minds. This is one of those times we have to be decisive--and we have to look decisive and quit beating around the bush. They're really getting impatient on this one. Anyway, we've had a lot of experience in this area."

Bernie replies that, even if the data on B is left out, the data on A is hardly conclusive. Alex replies, "Look you're a bright person. You can make the numbers look good without much difficulty--do the math backwards if you have to. Just get the report done in the next two days!"

Bernie likes working for Larom, and he feels lucky to have landed such a good job right out of Engineering Tech. He is also due for a significant pay raise soon if he plays his cards right.

What do you think Bernie should do? Explain your choice.

1. Write up the report as Alex says.
2. Refuse to write up the report, saying he will have no part in falsifying a report.
3. Other.

III

[Following II. 1.] Bernie decides to write up the report. When he is finished, Alex asks him to sign it. Bernie now has second thoughts. He wonders if he should sign his name to a report that omits his preliminary research on catalyst B. Should he sign it?

IV

Bernie has now had more time to do research on catalyst B. After several weeks his research quite decisively indicates that, contrary to the expectations of Alex and the other more experienced engineers in the unit, catalyst B really would have been, far and away, the better choice. What should Bernie do now?

1. Keep the data to himself--don't make trouble.
2. Tell Alex and let him decide what, if anything, to do.
3. Other.

V

Bernie decides to say nothing. Although Larom has lost a lot of money by investing in an inferior catalyst, it is quite possible that this is the end of the matter for Bernie. The customer never complains, and no one outside at Larom raises any questions. However, it might go otherwise. Suppose a Larom competitor discovers that catalyst B is better for this type of work and it begins receiving contracts that Larom would normally be awarded. Further, what if Alex's superior then makes an inquiry into why his unit has missed out on this development?

VI

[Following II. 3.]

Bernie tries to convince Alex that a straightforward report should be submitted. Since there is a virtual consensus in the unit that catalyst A is best, A can be recommended. But the preliminary evidence about B can also be mentioned. After all, Bernie suggests, if the entire unit is convinced that A is best despite the preliminary evidence about B, why wouldn't those outside the unit be persuaded by the received wisdom of the unit? If they aren't persuaded, perhaps they will grant the unit more time to continue the research on B.

Somewhat to his surprise, Bernie finds Alex and the others receptive to his suggestion. The preliminary evidence about catalyst B is included in the report, even though A is recommended.

Unfortunately, Alex's superiors are very upset with the recommendation. They are unwilling to go ahead with the project without further testing, but they bitterly complain that the further delay will be very costly. Alex is severely criticised for not having a more convincing set of data. He, in turn, blames his staff, especially Bernie, the new

specialist in this area. Bernie, Alex tells his superiors, failed to complete the necessary testing in a timely fashion. Alex tells his superiors that he should have supervised Bernie's work more closely, and he assures them that he will not let matters get out of control again. Although Bernie is not fired, he is not promoted and his salary is frozen for another year. What should he do?

1. Nothing. No good will come from complaining.

2. Confront Alex, telling him what you think of

what he has done, but carrying it no further.

3. Other.

VII

Bernie decides he has nothing to gain from complaining to Alex or anyone else about becoming the "scapegoat" of the project. So, he keeps quiet. Sometime later, Alex is being considered for promotion to another division. Members of Bernie's unit are privately interviewed about his performance in the unit. Bernie is told that his comments will be kept confidential. What should he say in his interview?

VIII

Bernie says nothing negative about Alex in the interview. None of the others in the unit do either. Alex is promoted to another division. However, a year later it is discovered that he has directed someone in his new division to falsify data for reasons very similar to those in Bernie's original situation. The new person does what Alex asks. The result is a significant loss of money to Larom--only this time there is an expensive product-liability lawsuit relating to an unsafe Larom product. An inquiry takes place. The person who has falsified the report says that Alex has often requested that data be falsified--and that he typically has gotten young engineers to do the "dirty work" for him. So, it comes back to Bernie. He is asked why he didn't report Alex's orders to falsify data when the matter first came up. Bernie is accused of being partly responsible for allowing Alex to be promoted--with the resulting harm to others and loss of money and reputation to Larom.

[This case is inspired by two brief case studies presented by Roy V. Hughson and Philip M. Kohn in **Chemical Engineer**, May 5, 1980: "The Falsified Data" and "The Falsified Data Strike Back." These are two of several brief case studies that they present. You might enjoy looking at the others. They are on pp. 100-107 of that issue.]

COMMENTARIES

Michael S. Pritchard

Although convinced there may be reason to prefer catalyst B to A, Bernie may also be convinced that deferring to the judgment of the more experienced engineers is the best course of action -- especially in this kind of situation. He may actually be persuaded that the others are probably right. His is a minority view, and he is considerably less experienced. The recommendation apparently cannot wait for further testing. Besides, Alex is Bernie's division head, and Bernie may believe that his job is to do as he is told. So, Bernie may conclude, it is best to support his colleagues' recommendation -- both from the standpoint of Larom, Inc. and his own self-interest.

However, four cautions should be noted from the outset. First, although Bernie may have a general obligation to do what he is told by his superiors, blind or unthinking obedience is not obligatory. He has no obligation to do anything illegal or unethical, regardless of which "authority" requests it. In this case, it is not at all clear that Alex's superiors at Larom would approve of his effort to falsify the report, or that they would fault Bernie for refusing to comply with Alex's request. After all, the report is for them. Why would they willingly agree to be duped -- especially since approving the wrong catalyst could turn out to be very costly to Larom?

Second, Bernie should be alert to the possibility of what sociologist Irving Janis calls **groupthink** (Groupthink). This is the tendency of cohesive groups to arrive at consensus at the expense of critical thinking. Janis identifies eight "symptoms" of groupthink:

1. The illusion of group invulnerability. ("We've always been right before.")
2. Shared stereotypes. ("We/they" thinking about those outside the group who may disagree -- the other as "enemy.")
3. Rationalizations.
4. Unquestioned belief in the group's inherent morality. ("We're all committed to doing the right thing.")
5. Self-censorship by individual members. (Reluctance to "rock the boat.")
6. The illusion of unanimity. (Silence taken as agreement.)
7. Direct pressure applied to ensure conformity when dissenting opinions are expressed. ("We can't wait forever.")
8. Mind-guarding. (Keeping outsiders who have dissenting views from presenting their views directly to the group -- "I'll pass your concerns on to the group.")

Several of these symptoms seem to be present at the initial meeting. There is evidence that at least some of the senior members of the group share the illusion of invulnerability ("We've been working on projects like this for years...."). Rationalizations for not having done more research on catalyst B follows on the heels of this illusion. Given the shared purpose of recommending the best catalyst for the job, the members may believe in the inherent morality of the group ("We know we're on the right side"). Silence in response to Alex's final look around the room for further comments may be the result of some self-censorship (especially if Bernie fails to speak up). This, in turn, feeds the illusion of unanimity. Finally, Alex's evident desire to orchestrate the group to a quick and decisive resolution indicates a readiness to apply direct pressure to any dissenters. Given that much may be at stake for Larom in this situation, Bernie is well advised to be alert to such group dynamics, rather than simply deferring his more senior colleagues.

Third, Bernie seems to be the only one with evidence that catalyst B might be preferable, and his previous work with catalyst B has already impressed Alex. If he does not speak up, who will? It is unfortunate that Alex did not assign Bernie to work on catalyst B earlier. Perhaps sometime earlier Bernie should have made a special point of discussing with his colleagues some of his previous work with catalyst B. But why didn't Alex take the lead? It seems that an opportunity for significant research when Bernie first joined the R&D Division was lost. However, shifting responsibility to Alex for lacking foresight does not relieve Bernie of responsibility for speaking up now.

Fourth, Bernie is not only asked to suppress data about catalyst B but also to alter the other data. That is, he is asked to **lie**. Alex no doubt sees this as a lie intended to "protect the truth," since he believes that catalyst A really is best. However, as Sissela Bok convincingly argues, even lies of this sort are ethically questionable ([Lying: Moral Choice in Public and Private Life](#)). She points out that we have a tendency to overestimate the good that comes from lying and to underestimate the harm that comes from lying. Individually and collectively lies do much to undermine trust. Also, by deceiving others, lies often lead people to make decisions they would not make if they had more reliable information, thus undermining their autonomy. Bok concludes that we should lie only after looking carefully to see if any alternatives preferable to lying are available.

One alternative that might work is for Bernie to suggest that they include all the available data but still recommend catalyst A. Since the data has not discouraged them from recommending catalyst A, why should they fear being forthright with others? As a later scenario shows, this tactic could have unfortunate consequences for Bernie, too. But this is ethically preferable to submitting a falsified report -- signed or unsigned. No option guarantees there will not be complications. So, why not do what seems right and let the "chips fall" where they will?

Should things backfire as described in the later scenario, it may be understandable that Bernie would not speak out against Alex when Alex tries to lay the blame on Bernie, but it would not be wrong for Bernie to speak out even if he ends up being demoted or losing his job. Bernie's failure to speak out in the confidential interview seems highly questionable, however. Bernie has witnessed (and been victimized by) at least three examples of Alex's poor leadership: his failure to support needed research in a timely fashion; his effort to get Bernie to falsify data; and his lying about Bernie's shortcomings. Bernie faces relatively little risk in speaking confidentially about these matters in the interview; and, as we see in one of the later scenarios, he may do much good for Larom by speaking out.

Although it might seem to Bernie throughout this case that it would be **prudent** not to "rock the boat," it is not at all clear that this would be a correct assessment on his part. There are too many ways in which things can go wrong for him to be sure what a prudent course of action would be. However, prudence and ethics are not the same, and it seems that we can be more certain about what it would be ethical for Bernie to do.

Two basic lines of thought might help Bernie sort out what is at stake ethically when he is facing the initial question of whether to falsify data. One line has already been discussed -- viz., that of thinking through the possible **consequences** of doing as Alex says, and of comparing this with other alternatives. In doing this Bernie needs to consider his basic responsibilities to Larom. (How what he does might affect Larom's customers and society generally is perhaps too indeterminate to be of much relevance here.) Although in the "heat of the moment" Bernie may find it difficult to think of little else than Alex and the others pressing for closure, his responsibilities are not exhausted by relationships to his divisional colleagues.

A second line of thought rests on the idea of **universalizability**: Whatever is right for Bernie in this situation is right for similar persons in similar circumstances. It may not be easy to determine just what should count as relevantly similar circumstances, but any serious thinking about this will conclude that Bernie's situation is hardly unique -- and this thinking will not confine itself just to engineers who are deciding whether to falsify data. Bernie needs to think about the more general phenomenon of lying. Just how sweeping must his acceptance of lying be in order for him to conclude, in good faith, that falsifying data in this case is justifiable from an ethical point of view? To say that the sweep is very wide indeed is not to **predict** that doing what Alex request will result in widespread lying. Rather, it is to point to the **principle** of action that Bernie must implicitly accept if he does falsify the data. Once Bernie looks at his situation in terms of this broader principle, he will likely find it much

more difficult to find falsifying the data acceptable than if he asks only what are the likely consequences of doing as Alex requests.

FURTHER READING

Bok, Sissela, Lying: Moral Choice in Public and Private Life (New York: Vintage Books, 1978).

Jaksa, James and Michael S. Pritchard, Communication Ethics: Methods of Analysis (Belmont, CA: Wadsworth, 1988). [See especially Ch. 7, "Groupthink" and Ch. 8, "The Challenger Disaster." Also, see Chs. 4-6 on methods of ethical analysis and justification.]

Janis, Irving, Groupthink, 2nd ed. (Boston: Houghton Mifflin, 1983), esp. pp. 14-47.