

Critical Thinking and Technical Decisions

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Abstract

The world of organizational management, including the Human Resource Management discipline, holds the members of the legal profession in very high regard. The edicts issuing from the office of the general council in most organizations are taken as unassailable gospel. However, the logical process that is the antecedent to this management approach fails, at times, to consider contemporary critical thinking doctrine. The author proposes a more rational and level headed approach, capitalizing on the work of the paragons of the critical thinking discipline: Richard Paul and Linda Elder. The author makes a case, rendering the decision-making process undertaken in every management endeavor as a juxtaposition to the Paul and Elder framework. A scenario from an organization in the construction industry is presented, which illustrates the suggested revision to management's way of thinking.

Legal Issues Confronting the Critical Thinking Manager: The Lay of the Land

In a large heavy construction company presently engaged in the construction of a road project, the transportation superintendent reports to the vice president of operations that he is unable to move a piece of heavy equipment (an excavator) to a job site as he was directed to do. He tells the VP that the equipment is oversized and that movement of this equipment on city roadways would require a permit from the city in which the move is to take place. The appropriate city office has been contacted and has declined to issue a permit because it places the heavy semi-trailer truck and large excavator on city streets during a period of high traffic. The transportation superintendent tells the VP that he is thus statutorily prohibited from moving the equipment.

The VP knows that work on the project will be idled until the excavator is delivered. The project is responsible for roughly \$8,000 in revenue for each day of operation. But idling the job has ramifications far beyond the mere loss of a day's revenue. For reasons relating to the project's critical path, it is a serious problem if the project is delayed.

Against the protest from the transportation superintendent, the VP directs that the excavator be moved to the job site as though a permit were in effect. The superintendent energetically cautions that a fine of as much as \$20,000 could be assessed if the move was detected by city police. "I don't want to break the law," declares the TS. Nevertheless, the VP insists that the move take place. He comforts the TS as he tells him, "You are not breaking the law....I am."

Critical Thinking Application

The VP has to make a decision that must fall into one or the other of two fairly well-defined categories. He could adhere to the city statute and risk turning the project into a loss. Or he could move the excavator and save the project but risk a very heavy fine.

Information as an Element of Decision Making

Managers manage risk. That is to say, as they move through their day, they are confronted by decisions that require them to select from a range of options. Each of the options, to some extent, presents the manager with a risk versus gain scenario. The manager is weighing potential loss with potential gain. He must properly understand the losses, including the seriousness of the loss and the likelihood the loss will occur. He must also understand the potential gain and its associated likelihood. In order to make the right decision, more correctly, in order to avoid making the wrong decision, the manager needs information about the decision. We will show how this process fits precisely within the framework established by Paul and Elder [1].

Nearly all contemporarily accepted decision-making models have a commonality. In each model, the first step is “problem identification.” No decision can be properly made unless all of the alternatives are accurately understood. Betsch and Glockner encourage us to start the decision making process by understanding all of the alternatives [2]. The decision-maker must embark on an exhaustive search for information. Only when the alternatives have been fully comprehended, along with all of the ramifications, may the information search stop. This author recognizes that in some cases the length of the information search process is limited by the urgency of the situation. The present example was chosen both for its simplicity and for the fact that the decision must be made quickly.

The decision to be made by the VP appears to be relatively simple. That is to say, the information is limited in volume and seems to fully describe the situation. The VP’s options are limited to moving the excavator or not moving the excavator. But he must decide quickly because the job is idled already. The facts are

- a) An excavator is needed on a project in order for the project to continue.
- b) If the project is idled for any reason, the company could incur great loss.
- c) Movement of the excavator could expose the organization to a large fine.

Our mention of information opens the door to Paul and Elder’s [1] conceptualization of critical thinking as they posit that information is one of the eight elements of thought. Lee and Dry [3] hypothesize that as managers make decisions, they consider two things about the information that is presented to them. Primarily they consider how accurate they think the information is. Again we invoke Paul and Elder as we cite accuracy as one of the universal intellectual standards. This is the basis of the first hypothesis presented in the research. In the second hypothesis, the authors state that the decision-maker will also consider how frequently or how often the information is presented.

Through Lee and Dry, the decision making process becomes more complex because information processing becomes more complex. Their H1 invokes the concept of accuracy. The VP must consider potential inaccuracies in facts a, b, and c. One need not be familiar with heavy construction in order to innumerate the potential inaccuracies. But for penetration consider, for example, under fact c:

- How likely is it that the movement of the excavator will be detected?
- How likely is it that the full fine of \$20,000.00 would be assessed?
- If the full fine is assessed, could an appeal reduce the fine?
- Is it possible that in addition to writing a citation for the illegal move, the police officer could impound the excavator and truck?

It Is Easy to See That Lee and Dry's H1 Is Pertinent

The first hypothesis is self-evident, but the second requires a bit of exploration to solidify understanding. In their study, Lee and Dry demonstrated that the likelihood that a decision-maker will permit a bit of information to influence their decision is directly proportional to the number of times they are presented with the information [3]. In our construction company example, H2 is operationalized as we consider the possibility that the transportation superintendent comes into the VP's office with declined permit situations every day of the week. Thus in the eyes of the VP, the superintendent has assumed the role of "Chicken Little." According to the conclusions emerging from Lee and Dry's study, the frequent messages, in this case the repeated reports of an inability to move a piece of heavy equipment, will influence the decision-maker's choice.

In addition to accuracy of information and frequency of the message, decision-makers will likely consider the degree to which the information comports with their view of the issue as they use the information to inform their decision [4]. Stakeholder theory [5] presents a model in which the organization is understood as a politico-economic system. In this system, each interest group or entity will view a given decision and the associated range of options against their own frame of reference. For simplicity we define three groups in our example to include, the policy maker (the VP), the information provider(s) (one of which is the transportation superintendent), and the stakeholders, which is a relatively non-descript group of individuals who will be impacted by the VP's decision.

It can be said that the transportation superintendent is assuming the position akin to that which would be embraced by an attorney for the organization. This is true since the TS is advising action based solely upon a statutory position. He is telling the VP what the law says. This is very similar to a position that would be embraced by an attorney. On the other hand, the VP's responsibility to guard for the interests of the greater range of stakeholders may impel him to an alternate course of action. The VP assumes the role of the "policy maker" in this scenario. As such, he cares about long term profit and the continued health of the organization that will not likely hinge on a fine of \$20,000.00, which may or may not have to be paid. On the other hand, the long term interest of the organization would very likely be negatively impacted by an unprofitable project.

The Nature of Information Processing

It is incumbent upon policy makers to carefully consider the information received as they make their decision. The organization has been described as a “politico-economic-system” [5]. In our example organization, that group Freeman refers to as the stakeholders is joined by two additional groups, the policy makers and the information providers. Freeman portrays the organization as “an entity enmeshed within a set of interactions between parties inside the organization.” The different groups emerge attempting in their own interest to influence the functioning of the organization in a way they perceive as “legitimate.” In this case, the term “legitimate” is defined by both the policy makers and the stakeholders as meeting the stakeholders’ needs and matching the stakeholders’ viewpoints. This may or may not be the interpretation of the Information Providers. Freeman defines “stakeholders” as “the ensemble of parties who can have an effect on the organization or who can be affected by it” [5].

Legality and the Decision-Maker’s Choice

We have said that groups will attempt to influence the decision such that it is “legitimate” as the members of the group perceive legitimacy. It frequently happens that one of the groups that has an interest in the outcome of the decision is a group that we will refer to as the legal interest. In large organizations this group might include the general counsel for the organization. In small organizations that cannot rationalize a permanent group that contributes legal information, the group includes attorneys on retainer. This group will very likely equate the “legitimacy” to the “legality” of a point in question. However this equality may not be universally perceived by members of the various groups. Certainly, to the legal group, legality is the primary consideration. Organizational lawyers may look at themselves as benevolent dictators [6], attempting to mold their society in accordance with their own view of ethics.

It must be emphasized that in the model suggested by Freeman, there is one and only one policy maker. That is to say that, of the three groups, the responsibility for making decisions rests solely within one group, that of the policy makers. That is their function. They cannot abdicate the responsibility nor can they evade accountability. The policy makers must demand that the other groups remain within their functional boundaries. Information providers only provide information, and stakeholders only reap the benefits or pay the consequences of the decisions.

When the information providers include persons from the legal community such as representatives of the general counsel for the organization, two potential problems may arise. Both of these situations stem from the fact that in our stridently legalistic culture, we place attorneys on a pedestal. We assume that all attorneys know everything there is to know about the law. This assumption is obviously wrong minded. To debunk, we need only consider that in every court case, half of the attorneys are interpreting the law incorrectly. Another misunderstanding rests in the assumption that when an attorney is providing advice, that advice must be carried out to the letter. This approach in effect transfers the decision-making function from the manager (the policy maker) to the attorney (the information provider). Since the attorney likely has only one point of information (the law) and the manager has

many points of information (the law plus many other points), the decision-making responsibility must remain with the manager.

As regards the comparison of validity versus legality, it bears repeating that the relative importance of these two aspects of a situation is not universally accepted as being equal. Two things impact this perception:

- a. The question of who is doing the perceiving
- b. The question of when the issue is being raised

The first instance proposes that different groups will perceive different things to be important to the decision at hand. To those in the legal group, it will be unacceptable to select an option that is potentially actionable or illegal. However, if that viewpoint restricts the options available to the policy makers such that they are left with only those that are tremendously expensive to implement, the policy makers may be forced to bend the rules simply to permit the organization to survive.

As a very real part of stakeholder theory, each member of Freeman's system will try to protect his or her interest by attempting to influence management decisions [4]. In effect, members of the three groups gain credibility when decisions go their way. So the Legal group may present an opinion. If the policy maker decides the issue based solely upon the information provided by the legal group, the credibility of the legal group is reinforced.

In some cases, the legal aspect of the decision is sufficiently compelling that the information originating with the Legal group must be the sole consideration. But it is the policy maker who must make the decision, and hence it is up to the policy maker which information guides the decision. In decisions that have a legal component, the policy makers determine the legal framework while the legal experts merely provide information to the policy makers who will establish the framework.

Re-examination of the construction project example above is helpful. The legal group (in this case that group includes only the transportation superintendent because he is speaking from a legal standpoint) would tell the VP (the policy maker) that he must always follow all city ordinances. This opinion would be based upon the belief that it is never permissible to break the law. The policy maker has the right to accept or dismiss the superintendent's advice. But should the VP decline to take the advice, there is no reason for the superintendent to be offended, or to become indignant. He must simply assume that the policy maker has information to which the superintendent as a single information provider is not privy.

The Universal Intellectual Standards Applied to the information

We are suggesting a basic and proven technique in decision making. The decision-making process must adhere to the tenets of critical thinking. Under critical thinking, a decision cannot be made until a great portion of the information is received. As we consider the connection between critical thinking and decision making, we must refer to the work of Richard Paul and Linda Elder, two major contributors to the field. According to Paul and

Elder, information is one of the “elements of thought” and hence is an essential component in the making of sound decisions [1].

These authors gave us some universal intellectual standards that should be applied primarily to the information component of every decision. The Universal Intellectual Standards may be helpful in informing the VP’s response to the problem. The intellectual standards are summarized below, with an associated description of the way they should be understood by those who are parties to the VP’s decision:

Clarity – The extent to which the information is understandable

Accuracy – The extent to which the information is properly descriptive

Precision – The extent to which the information is expressed in terms of resolution

Relevance – The extent to which the information should be part of the decision-making process

Depth – The extent to which the information presents all possible effects in detail

Breadth – The extent to which the information comprehensively covers all of the possible effects

As we examine these universal intellectual standards, it is important to remember that the groups involved in the decision, the policy makers, the information providers, and the stakeholders, will view the information from differing viewpoints. To illustrate, the standard entitled “accuracy” as we did previously is employed. To the superintendent, it is very accurate to state that if he moves the equipment without a permit the organization will be fined. He views that as the worst possible outcome and totally unacceptable. But from the viewpoint of the VP, it may not be completely accurate that a fine will be levied since it assumes that the truck driver will be apprehended. Further, being fined for the offence may not be the worst possible outcome. It could potentially be very acceptable in comparison with other possibilities.

To arrive at the right decision, the policy maker must consider the legal input along with all other information that informs the decision. Failure to do so is falling into a trap that scholars encourage the policy maker to guard against. Adjibolosoo refers to the pitfall as “the indiscriminate use of regulations and policies” [7]. That researcher is not advocating lawlessness. Clearly, if a decision is informed by the law to the extent that there is a potential for a law to be broken, the organization is compelled to proceed with a full understanding of the ramifications of that eventuality.

Other scholars encourage the legal group when acting as the information provider to operate within the “legal advisor” role in a way that is subservient to the VP’s role as an advocate for the organization [8]. As he or she provides an input to the decision making process, he or she must acknowledge both roles in their proper perspective. Policy makers are frequently pulled

in different directions [9] as they try to adhere to an overly restrictive interpretation of the law while simultaneously guarding for the good of the organization.

The Synergy in the Groups

In the decision-making process, a manager has a responsibility to consider as much information as time permits. Legal information is one of the bits of information he must consider. However, that manager must acknowledge that the legal information is not the only bit of information and in many cases it may not be the most important bit of information. The manager is well advised to apply critical thinking guidelines as he views information as one of the elements of thought. He should further assess information using universal intellectual standards.

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Biography

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