It's a matter of communication

HAYAKAWA'S COW & SAFETY
ABSTRACT. The author blends abstract and reality with a bit of philosophy in his premise that safety professionals sometimes are not able to get across their ideas to top management, mainly because of the language used. He suggests that safety professionals have a need to “conceive and shepherd” their safety programs so that they survive, but leaves it up to the safety people to decide how to communicate abstract safety concepts to the management level.

A specific example of the failure of a safety professional to make his ideas clear to a division vice president or a laborer is hardly necessary. Repeated failures illuminate and emphasize this familiar problem. A written safety rule doesn’t mean the same thing to these three people. The purpose of the rule, no matter how ideal, isn’t understood the same way by all three. The success of the rule isn’t measured on the same scale by all three. A failure of the application of the rule is seen differently by all three. The words are the same but not the message.

Let’s take the idea of the abstraction ladder developed by S. I. Hayakawa in “Language in Thought and Action” and transfer this idea to safety, to the positions on the conventional pyramid organization chart or more accurately to the people represented by the chart.

Dr. Hayakawa uses a cow as his example up the abstraction ladder. He explores the various perceptions and observations of this commonplace animal to illustrate his point. Hayakawa’s Cow is an easily copied example to explain some of the failure in administering loss control programs. There are complicated examples that could be used to illustrate the transformation point of view. It is easier to start with a practical example.

One device for showing the transformation will be the various meanings of a Ready-Mix Concrete Truck as it goes up the abstraction ladder. After taking the truck up through the levels of abstraction the word “safety” will get similar consideration. Both the truck and the abstract idea of safety goes through transformations. A Ready-Mix Truck has several appearances. Safety has several interpretations.

Concepts of a Ready-Mix truck

Thus the atomic level Ready-Mix Truck is hardly separable from the atomic level sardine can, chair, fire, earth, pond or overhead crane. There is no recognizable Ready-Mix Truck in the narrow atomic view.

However, there are clearly atoms in a Ready-Mix Truck.

Next there is the physical truck as seen. This is not the work "TRUCK" READY-MIX 1—EACH". This is the truck that our senses perceive and our brains integrate into the physical thing we agree is a Ready-Mix Truck. We look at and see a truck. Many—almost all—of the features of the atomic level truck are left out. However, this object of experience is quite real. It is relatively easy to agree upon the nature of the object.

After identifying this physical reality Ready-Mix Truck we are able to assign some symbols. We take R-E-A-D-Y—M-I-X T-R-U-C-K and use these symbols to represent the 50,000 lbs., $50,000 piece of machinery that moves on the highway. These letter symbols are assigned to represent the physical reality described in the previous level. The word is not the truck. The word represents the truck. The physical reality truck is already left behind. The truck just might have a pet name given by the driver similar to the names given planes in W.W. II. Let’s call this one Mud Mower.

The word as a symbol has almost no reference to the truck as a physical thing. Mud Mower is the specific truck driven by one driver. If the driver is assigned to a different identical truck for a day, it is not Mud Mower.

The more general term “Ready-Mix Trucks” is assigned to all the trucks in the operation. There are different kinds and sizes of trucks but there are common features. “Ready-Mix Trucks” is a general word for an average. The differences between Truck1, Truck2, and Truck3 are ignored. But the inherent capacity to mix and deliver concrete is common to all.

There is now a new level. As Mud Mover is reduced to just a small part of a fleet of 250 trucks she is still moderately special. However, only those characteristics that she has in common with the dump trucks, trains, cranes, cars, airplanes and ships are part of the average of “transportation units” (or materials handling units”). This is a different level on the abstraction ladder.

Still more abstract is what happens to Mud Mover when she is a part of the transportation or materials handling industries. Features that she has in common with ware-

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houses, lift trucks, highways, runways, office equipment, piers and the repair shop have to be included. Mud Mover has been reduced to an almost unidentifiable part of the Transportation Assets.

Even more abstract is including Mud Mover as a part of Wealth. As a part of “Wealth”, a private proprietor, company president or stock holder can reflect that he has trucks to manipulate that deliver concrete but his manipulating is done only by use of symbols rather than by any physical contact with trucks and concrete.

Organizational perception

The conventional pyramid organization chart with various name changes goes from worker to foreman to superintendent to production manager to division manager to regional vice president to corporate president. There are multiple levels on the line organization chart. Let’s toy with the concept of our Ready-Mix Truck as it moves through the minds of various people in the organization.

To the driver the truck is a piece of equipment that the mechanic can’t keep running, and is hard to start on cold mornings, and is hard to climb onto or about, and always gets dirty. To the mechanic this truck is a beautiful piece of machinery that the driver abuses. The driver, in the mechanic’s mind, dreams up ways to break the truck.

Next in the line is the Foreman. The driver’s foreman and the mechanic’s foreman have views somewhat similar to their drivers and mechanics.

Both foreman no longer think in terms of one truck. They are thinking of all their trucks and how to keep them running more efficiently. These two foremen are not thinking of the entire corporate fleet, but rather just their limited part of it.

The superintendent has the responsibility for both of these foremen, plus the foreman in charge of the plant. This expanded responsibility includes three foremen—driver, mechanics, and plant foreman as a part of the system to deliver concrete at the lowest cost. He thinks at the delivery system level and looks at cost control.

The only way Mud Mover comes to his attention is if the truck is really good or really bad. A particular truck has little or no identity to him. The trucks are a part of an abstraction. He knows that he wants 10 new ones to replace eight old ones.

The production manager is not only concerned with the operation of the fleet but of the plant that gathers sand, stone, cement and water. There are raw material supply concerns. The range of view has to be wider. The variety of problems at this level are greater and he now has to face the problem of multiple needs for capital. He doesn’t just want trucks and a new garage. The plant has bins and silos that need repair, or there are needs for a new bin to hold a special material. The production manager has to face the problem of providing and handling his raw materials perhaps six months or a year in advance.

The division manager not only has production problems competing for his attention but also sales, marketing, government regulations and many more. His point of view has to include more of the features of the whole business in his area together with outside influences. He has to be aware of competing business. He has the concern for operational cost control, and the competition for capital is part of the game. He has no immediate contact with the trucks.

The regional vice president has an even more abstract and distant view of Mud Mover.

The president deals almost completely with abstractions. He has to take limited resources and stretch them for the good of the corporation. He doesn’t prepare the capital and operating budgets, but he has a vital interest in them. The budgets and reports, insofar as Mud Mover is concerned, are nearly abstractions of an abstraction.

This again gets us to the top of the abstraction ladder and, in addition, to the top of the conventional organization chart.

To review: The truck went from a
physical reality to become a part of an abstract concept.

The abstraction of safety

The preceding transformation took place with something as easily understood and visualized as a concrete truck. Now, transform an idea as abstract as “safety”.

Safety starts out abstract and only gets worse.

Dr. Hayakawa repeats a story in his book of how it is impossible to take a picture of work. It is possible to take a picture of a person laying brick but it is not possible to make a picture of the all encompassing concept of work.

Safety is much like this

To the driver and mechanic, “safety” has no physical reality. Both have experienced injuries and accidents. Both have experienced preventive measures and both have experienced either the failure of preventive measures or the failure to provide them. There is no “thing” that is “safety”. Safety cannot be photographed.

Perhaps to the driver and mechanic, for example, “safety” is brakes that work.

To their respective foreman, perhaps, “safety” is providing shop and equipment time to make certain that the brakes work. “Safety” is reminding people that there is work to be done to assure that the equipment and the brakes in particular have been checked. Neither foreman spends much time driving trucks. However, both foremen depend on each truck in the fleet to have the capacity to stop when each truck is called upon by a driver to stop.

These men—the driver, mechanic, and their foremen are also directly and indirectly involved whenever there is a failure. These people face each other and a good bit of the public each hour. “Brakes that work” is not an abstract concept to them.

The superintendent is aware of brakes that work but more likely don’t work when something happens. He is aware of the cost reports for routine maintenance. Company safety inspections cost time and money. He has spent hours thinking about whether or not to have his shops inspected and certified to make state safety inspections of the trucks. It will be cost efficient to make his own safety inspections but is it prudent to certify that his truck met the minimum state standards for safety even when his trucks are above standard? This is a value judgment. This judgment is far removed from mechanical success and adds a dimension to “safety”.

The superintendent is not agitated about the person making the safety inspection but is more likely concerned with the social, political, and economic problems of the shops as state inspection stations for his fleet.

The production manager certainly wants to be assured that the brakes work. However, he probably sees little of the special attention given to brakes. He cares just as much from the humanitarian point of view, but safe brakes and oil changes have, no doubt, merged into maintenance costs. These costs are routine and show up each month on the cost sheets.

The production manager has spent some time thinking of the broad impact of the new brake regulations from a capital and operational point of view.

Since this is a major issue he may have gone out and spoken to the driver of Mud Mover directly.

The production manager has a different and more remote idea of “brakes that work”. Safety is a major consideration, but not at the level of his foot on a brake pedal of a Ready-Mix truck.

Since the division manager is further removed from the shop in physical distance and daily problems, he has a more remote idea of brakes that work. And a more abstract idea of safety.

To the regional vice president safety is something he has provided people and resources to take care of, and he only interrupts when something is very good or very bad.

He is unaware of all the brakes that work, he will only hear about the serious failure on the public streets. His concern is for the people problem. He has had a program built to assure that the people are taking care of the mechanical details.

The president hears about the super accomplishments and the terrible failures. “Brakes that work” never make it to the top of the pyramid. A very serious accident does. The president feels the public and private pain of a failure but he is not going to go out and either check brake shoes or administer on-the-spot correction. These quality assurance actions are built into the operational system. Several layers of the organization have assured him that maintenance is being performed up to standard.

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To the driver, “safety” as repre-
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Presented by “brakes that work”, is almost a real and present thing. He can put his foot on the pedal and he expects an immediate result. But note: the abstract concept of safety has to be represented by some other reality. To the president, “brakes that work” is a tiny part of the total of his concerns. Thus safety is a very elusive concept and slips out of hand like a bar of soap in the bath. The word is in common use but its mutually agreed definition is much less common. The definition of safety is not agreed upon even by people at the same level. Thus the complications of lack of definitions multiply as the conversation and memos include more and more levels of management.

In most of the articles on the definition of safety, the definitions have not included the general idea of the abstract nature of the concept on the one hand, and the complicating features of point of view on the other. The truth in the cliché is acknowledged that you have to speak to a person in his own terms. Practice often falls short.

Isn’t it possible that we as managers have tried to speak up and down the chain of command in terms that only we have understood? We have taken an abstract idea and used it as though it had a single commonly accepted definition. The safety abstraction has never been limited to the point where it had a satisfactory operational definition from the top to the bottom of the conventional organization.

Our aspiring profession’s jargon has cut us off from the mainstream of management. Top management spends a great deal of time manipulating abstractions. The reality of brakes that work comes home on the drive to the house after work. This is the saving grace of our system. No matter how abstract a concept may be at the various levels of the organization, the boxes on the chart and the people represented by them are not immune to realities crashing in on them from the other levels. No manager can function without the concerns of the other levels affecting him.

Business organizations use the capital and operating budgets as the major devices for controlling goals and policies. The periodic reports tell how the organization is functioning relative to the budgets. The operating managers are measured against the budgets as they are written and followed.

Since the budgets and the management vocabulary and the reporting are so keyed to the operation, the safety program has to be keyed to the budget. The safety professional has to accommodate his thinking to the budget and management process. He has to make his abstraction fit the system.

It serves no purpose to introduce new abstractions to the budget process if they are not clearly understood and easily handled. It is fruitless to try to force our jargon on the management. Management has established its conceptual framework and the loss control discipline will have to adopt it.

There is no need to have a “safety item” in the printed budget on the president’s desk. However, just as there is some residual Cow and Ready-Mix Truck at the upper levels of the abstraction ladder there has to be some residual “safety” or “loss control” in the budget.

Thus the plan for action has to be to use management’s tools, methods, and words to accomplish the loss control goal. It is not likely that management will adopt the safety professional’s words.

To be effective the safety professional has to assure that his plans and programs are described in words management understands. To the mechanic and driver the program has to have real and present results. The brakes have to work. To the other levels on the chart the program and results have to be described and measured in a framework that fits the concerns of the level. The programs and results have to be described, measured and reported in abstractions familiar to the particular manager.

The real brakes have to be paid for with the abstraction of safety. The brake credit has to survive several transformations and levels of abstraction to debit the money abstraction.

To accomplish this the safety professional has to conceive and shepherd his program so that it survives in many atmospheres. Programs draw from abstractions to produce reality. It is not a bit surprising that safety rules don’t mean the same thing at any two levels in the organization.

References

“The treatment of ‘safety’ and ‘accident’ prevention as separate and unique activities within the organization has resulted in the development of a characteristic language and jargon which has served to further emphasize the satellite relationship”.

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