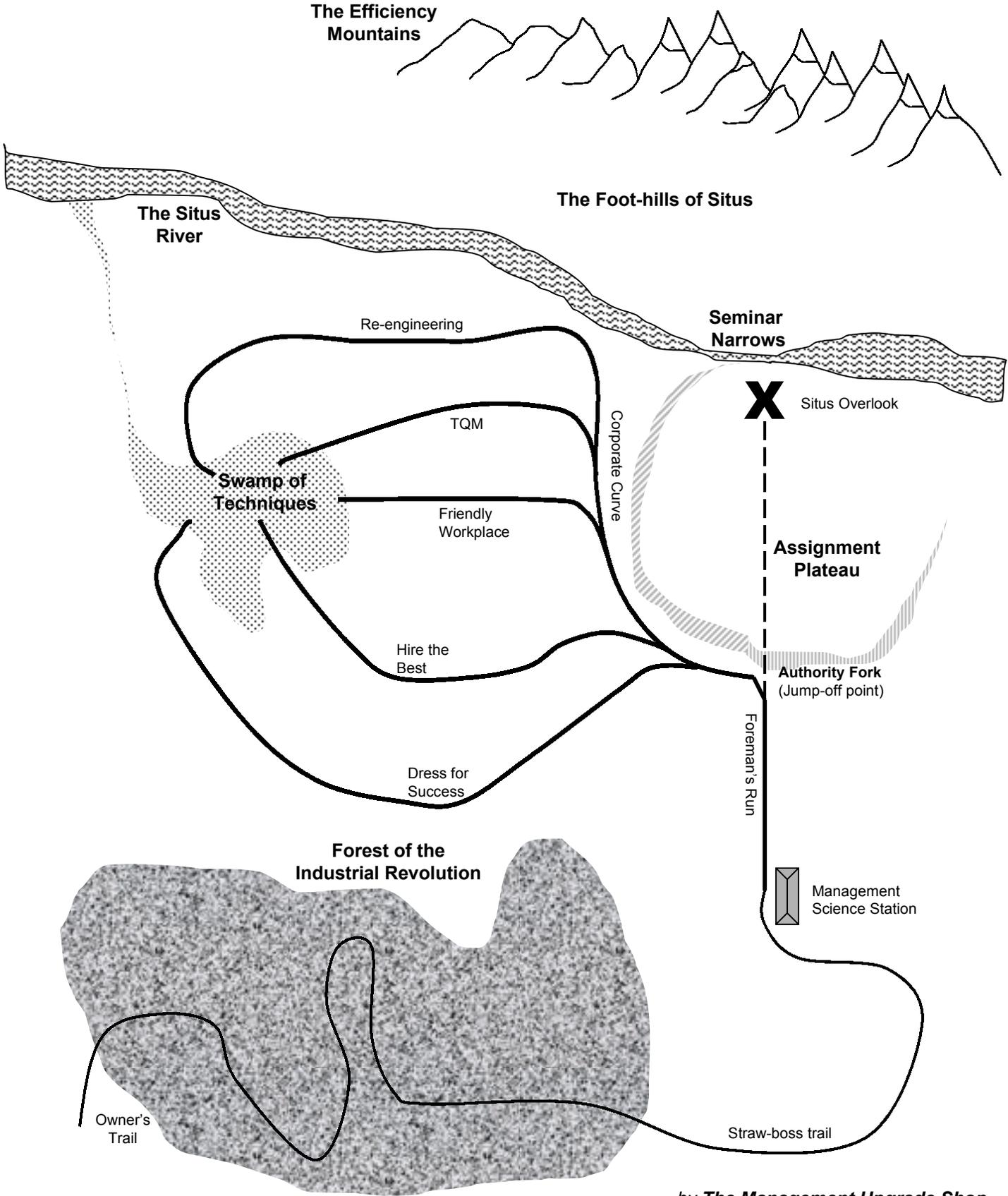


# The Art and Science of Assignment



by *The Management Upgrade Shop*

# **The Art and Science of Assignment**

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Jesse W. Brogan

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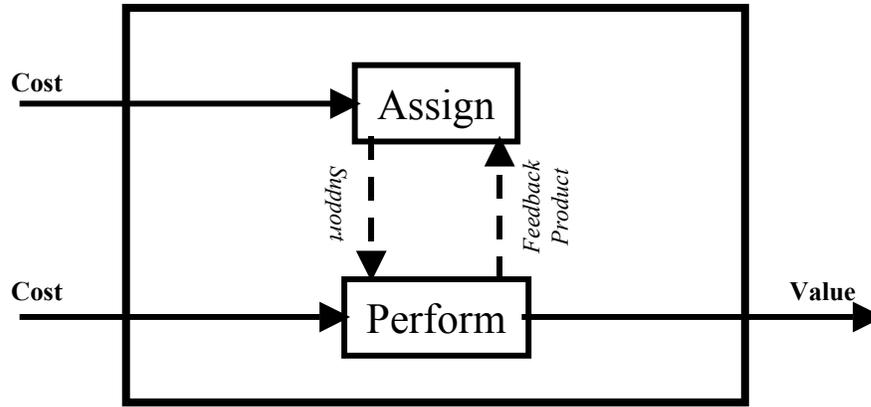
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# The Science of Assignment



*Brought to you by  
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Jesse Brogan: The originating researcher that established this seminar. An efficiency engineer with focus on the structure and operation of management systems. This seminar is addressed to efficient accomplishment of work through the efforts of subordinates.

One of the challenges is evaluation of what you receive in this seminar. It is not measured by increases in your knowledge of what to assign, but clear understandings of those processes and approaches that best yield the most desired results.

# **Assignment Challenge #1:**

You are being visited by a customer who buys about 20% of your product.

The assignment challenge is one of preparing for the visit, which will be in three days.

The first challenge is not a difficult problem, but one that involves priorities and your view of your own operation.

Without the science of management, the direction for action is unclear. It is not easy to see the best way to proceed. Do you take action yourself? Do you give responsibilities to a subordinate, and then abandon further interest in the effort? Do you use some sort of mix of these?

The challenge is not in what you actually do, but is within your own decision process, through which you determine a course of action and put it into effect.

## **Assignment Challenge #2:**

In your remote plant, there are employee allegations of sexual misconduct by middle managers.

How will you approach the issue with your subordinates?  
How much will you take personal charge of the situation, and how much will you delegate?

This second challenge is based on the relationship between control and responsibility. A situation is presented where it is unclear how much control you should personally assume, and how much responsibility you can give to subordinates in handling a potentially damaging situation.

How serious is the problem situation? You may not even know; and yet decision responsibility falls upon you.

The challenge is not so much how to best handle the situation, as what you are to do in handling it. What part do you choose to play, and how do you implement the decisions you make?

## **Assignment Challenge #3:**

You have opportunity to invest in owning a good race car, with the potential for advertisement that comes with winning races.

The investment is not tremendous, as it may be shared with other sponsors, and the value of advertisement will vary with the ability of the car to compete successfully.

The next challenge deals with personal involvement with the subject of your potential actions. Should you step out, and give control over these decisions to others? They might be just as personally involved as you are.

How are you to approach situations like this. Do you have rules to follow that will guide your actions. Are there general principles that tell you a best direction.

Once you know exactly what you intend to do, how do you go about making it happen?

## **Assignment Challenge #4:**

Your sales capacity suddenly jumps to 5% above your current production capacity.

Is it better for you to solicit a means for responding from your junior managers,

or to take charge and tap them for information supporting development of your own unique plan?

Another area where there is a present void in assignment logic is the handling of major changes to structure or capacity.

Here, it is not a matter of lacking knowledge of what has to be done, but of having no good direction for how to accomplish the desired end.

In this challenge, you are faced with complex and probably interlocking authorities and responsibilities. How do you proceed to assure that you get the best value from the change?

# **Assignment and Management**

Assignment is the primary management tool for those who accomplish things through the efforts of subordinates.

Assignment is a means for communicating performance requirements to those who will be required to perform.

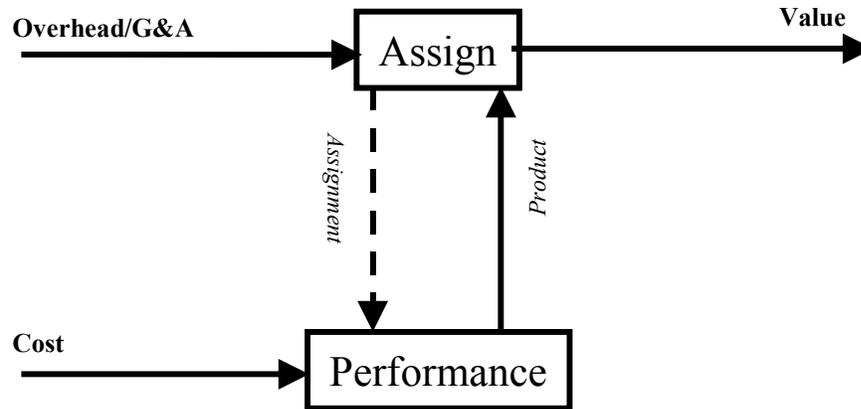
The success of this seminar is not found in knowing things, but in being able to put what you know into daily and most effective use.

We know that an effective assignment is one that accomplishes things through others, but this does little to help us evaluate the performance of making the assignment. The performance is not what the manager does, but what is done by those who receive the assignment.

You are the one who will demonstrate the success of this seminar by your ability to accomplish things through your subordinates, and by your skill at communicating your performance requirements through use of an assignment process.

Fulfillment of this success is found early in the seminar. However, it will not be until you look back over your experience that the extent of this success will be clear. You will assign with a skill and purposeful action that is hard to imagine until you address the art of assignment within the scientific process.

# Authority-Based Assignment



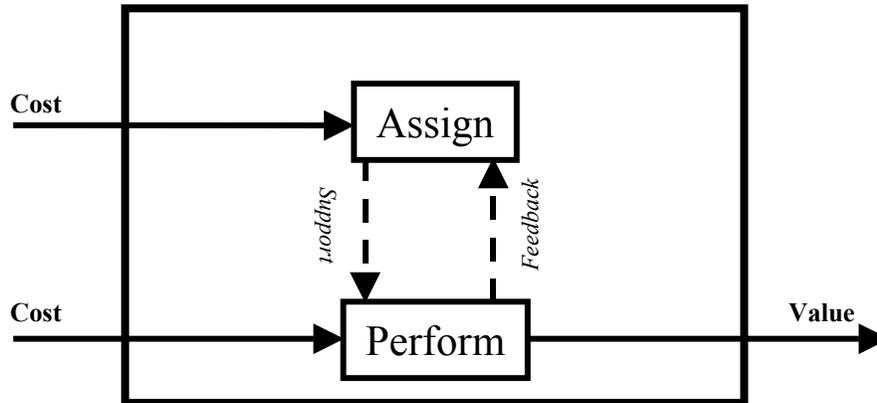
The foundation for our current assignment process is found in management that is based upon authority. We assign first to the manager, who then gains performance. Through subordinates, receives the results of performance on behalf of superiors, and then delivers the product.

The supervisor is the center of action, and the worker is approached as the tool by which the supervisor gains performance.

This viewpoint has several drawbacks, including a loss of focus on performance. The workman is there to support the Assigner, more than to assure performance.

The same was partly corrected by the Scientific Management Movement (1900-1920) in which work managers learned to support the productive effort by specific management actions.

# Scientific Assignment



The Scientific Management Movement was the start of efficiency engineering and gave birth to time study. It addressed a new attitude, where management became a value-added part of the performance effort.

One of the largest changes was the shift to focus on performance rather than authority. Management was defined in terms of gaining something through others; establishing our modern definition for the term.

While not addressed at that time, the effect of this change was to create a performance team made of workers and work managers who performed complementary work efforts yielding efficient performance of work.

As foundation for marked improvement in assignment, management became a performance in its own right, with things to accomplish in support of the performance of those who generate group (team) products. This opens the door to managing over management.

# **Assignment Basics**

Something to gain through the Assignment.

Someone to direct to the effort of gaining.

A concept of successful performance.

The science of management is an organization of knowledge for the purpose of operating a business effort. In this, assignment is a tool for accomplishment appropriate for a manager to apply within a business environment.

The start for any management action is something to be gained or accomplished through the assignment process. Unless there is some end product, there is no real assignment.

Management occurs only where there is someone through whom the desired product or result can be accomplished. Lacking this, there is either no performance, or there is self-assignment of the work effort.

Inherent in the concept of a product is the concept of success and failure. If there is to be effective management over a performance, there must also be a difference between success and failure in performance. Lacking this, management is not possible.

# **Basic Assignment Process**

Identify the product to be gained.

Identify the product to be returned.

Identify the one who will perform.

Negotiate resources with performer.

Assign performance based on resources.

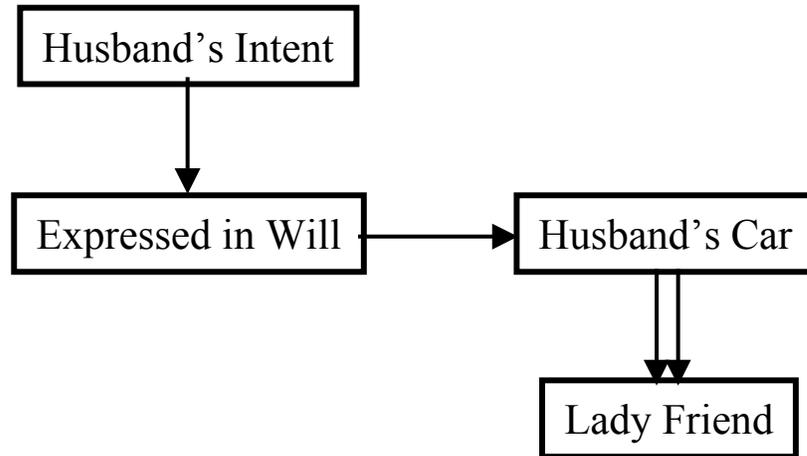
Manage over the performance.

This process is arranged to support performance through others in a business environment. It addresses identification and control over both value generated and the costs of gaining that value, the essentials for managing performance.

This supports the use of investment logic. It supports intelligence in the management effort that assures the performance.

It also supports the establishment of internal contracts, where the dedication of negotiated resources assures performance, and the success of the performer is largely assured before there is a completed assignment.

# Importance of Product

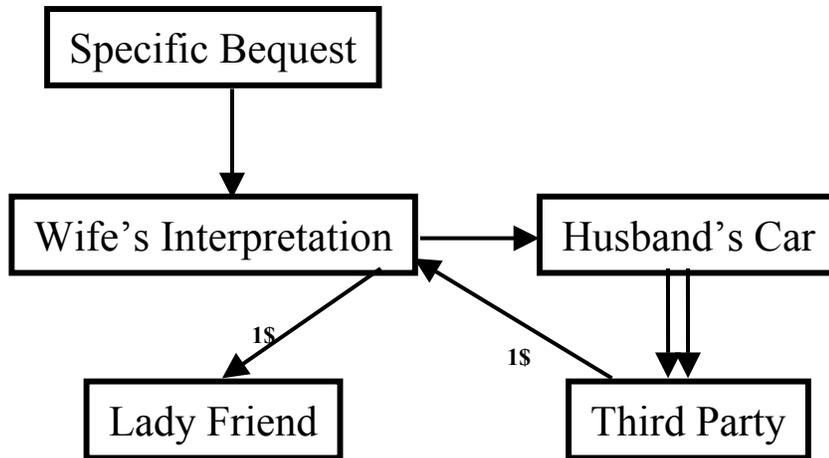


This situation may be approached as an attempted management. The Husband wished to accomplish something very specific through the bequest that he had placed in his will.

The lesson that we learn from the story is the importance of effective product definition to gaining through an assignment process. As noted, any failure in product definition puts the productive effort in threat.

In this case, the product was so defined that it could be gained without gaining the value that was the purpose for the attempted assignment! That assignment was then given to someone who had adverse interest in the bequest.

# Weak Product Definition

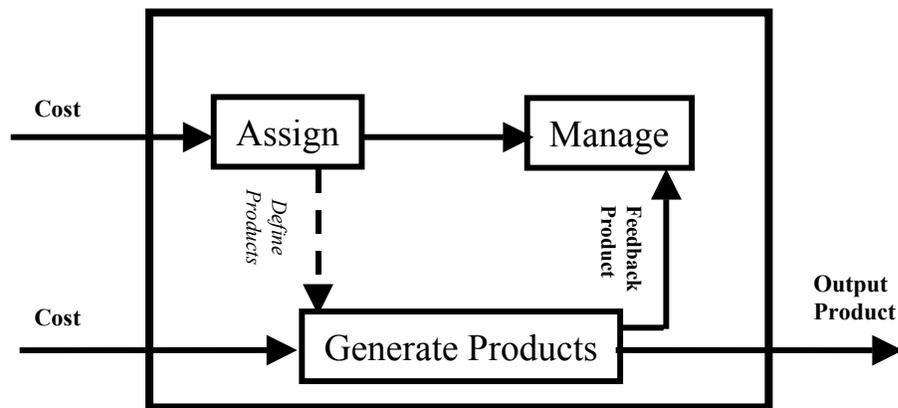


Instead of defining the value that the husband desired to gain, he established two alternative processes that were to be performed.

The one who received this assignment felt justified in selecting that process which best suited her own requirements. This resulted in an effective failure of the assignment process, and the desired product was not gained.

The concept that best assures the value is assignment by product. In this case, the product might be “delivery of the value of the car.” The sale of the car would then be an option only if it was based on a fair price.

## Value and Products



Two products, two management opportunities

The first product is an external output or result that is to be gained through the management effort. The second product is something that has value because it is received by the Assignor as notification for completion of the assignment.

A proper product is one that is used to tell the difference between success and failure for both the assignment and the management over the assignment.

Also note that the feedback product has no intrinsic value, but does have personal value to the one who makes the assignment. Expenditure of resources to gain the feedback product is justified by the value that the Assignor finds in its return.

## **Product and Value Communicated**

Product communicates value to be gained

Product generated signals driving value

Product returned to Assignor can be different

Return defines a second value potential

Personal Assignor valuation by product decision

Potential to communicate through product selection

Management is by value produced, and value consumed in the production effort. Assignment is understood by value relations.

The assignment of a product requirement is an excellent means for establishing what will have value. The product, as the value assigned, lends priority to the performance effort that generates the value.

Another indicator of value is the time and effort of the Assignor, which is a cost of the performance effort that generates the value. The more personal time and effort the Assignor is willing to put into making and managing the assignment, the greater the value and priority that is communicated to others.

There is no requirement that the product generated for export from the group has to be the same as that generated for return to the Assignor. This means that the selection of the feedback product is a potential means of communication.

## **Message by Chocolate**

<b><u>Return</u></b>	<b><u>Value Noted</u></b>
Open box & wrapping	Extremely high
Closed box & wrapping	Very high
Package for mail	Quite high
Signed Record	High
Special Record	Considerable
Notice of success	Moderate
Regular Record	Some

If the Assignor intends to receive the product of the effort of a subordinate for further personal handling, it indicates that the product is very important to the Assignor.

The more personal effort required, the greater the priority. Where less work is required, as in receiving a verbal notification that the work is complete, the lower the priority.

Receiving through intermediaries also lowers the apparent priority, as when the box of chocolates are mailed by the Assignor's secretary, and she tells him that it has been accomplished successfully.

# The Dragon Problem

<u>Assign to</u>	<u>Value Noted</u>
Self	Extremely high
The Army of Knights	Very high
Best Knight	Quite high
Worst Knight	Low
Distribute Weapons	Little
Protect Family	Almost none

The same basic logic applies to priorities communicated by the one to whom an assignment is given. The more valuable the resource, the more priority it indicates for the performance.

Here, there are other questions, such as whether the resource is damaged or used up in the productive effort. Priority is communicated through the selection of a resource that is appropriate for the purpose.

Consider the example where a resource is selected that is almost certain to fail. The communication of low priority in accomplishment is made at the selection.

Delegation of selection carries another message, generally communicating either a very high value in the process of the one who receives the delegation, or a “beneath my level of interest” in the assignment process.

# **Communicating by Assignee**

**Valuable Assignee = Valuable Product**

## **Highly Complex Communications**

Is there an ulterior motive to assignment?

Is the resource at risk?

Are there other values to be gained?

Is the resource expensive to assign?

Are there other conflicting priorities?

Does assignment affect ability to succeed?

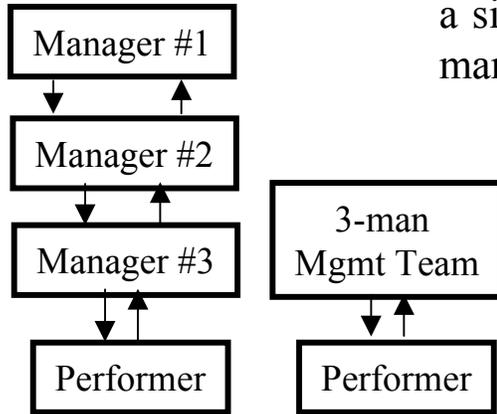
Perhaps the greatest problem in authority-based management is a failure to assign work to the right person. It is often assigned to a manager, who has no intention of performing the work, but only of reassigning it to a subordinate. This duplicates management over the performance.

There is great advantage to selecting the right assignee for the job. It is a powerful means of communicating priority, and assuring a performance that is appropriate for the priority given to the effort.

The communication can be very complex and involved, and much of it can be influenced by the personal reputation of the person who receives the assignment. Even the failure to select an appropriate person has a communication of value.

## Assign to One Who Performs

It is more effective to manage a single worker using a three-man management team:



Than management by serial reassignments through two subordinate managers.

The scientific assignment process minimizes the performance of management and support work. Assignment and management are work efforts, and should not be duplicated. This means that work must be assigned only once, and to the one who performs it. Any other assignment process causes duplication and inefficiency.

This raises a conflict with common business practices. We now assign to the manager who has the resources, almost assuring some duplication. The solution is by use of another common principle: If it is important enough to assign, it is important enough to manage. The Assignor manages whatever is assigned..

The technique for managing assignment begins with the negotiation process, where resources are identified as part of the assignment process. This provides a means for the Assignor to take charge of who receives assignments, assuring that the person selected is appropriate for an effective communication of priority.

## **Value in Available Resources**

**No resources = Assigned failure to perform**

### **Management Decisions affect resource availability**

Resources not previously assigned except overtime

Resources added during the assignment, overtime

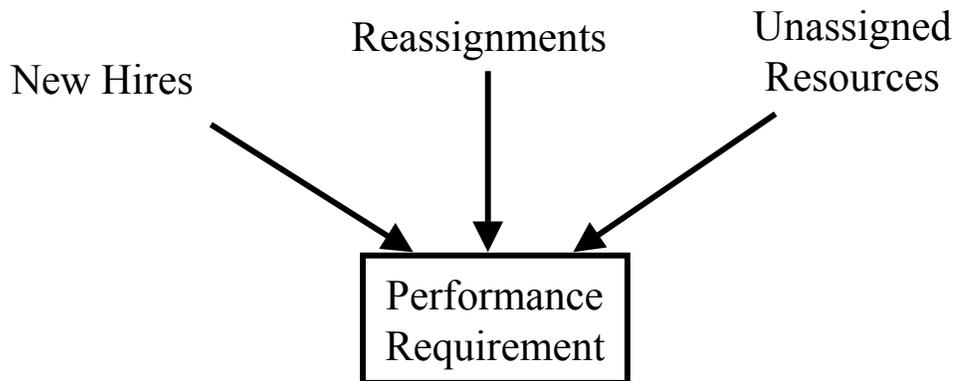
Resources reassigned from existing tasks

Another major conflict with modern management is the assignment process itself. Authority systems assign resources to subordinate managers, where they await assignment to meaningful work. The scientific process uses the assignment of resources as part of the assignment process, communicating priority and personal importance of product responsibilities.

This raises the potential for having unassigned resources that are available to take on assignments that arise. The ability to have such unassigned resources is part of an ability to manage, to plan for accomplishment. These resources can be treated as organizational fat. This briefly introduces other advanced management concepts such as managing flexibility and responsiveness, or the planning of reassignment potentials.

There is another message from using resources that have been given to supervisors. They are usually responsible for having workers strongly directed to performances. Any assignment will then take them away from other assigned work, giving a different, but quite powerful, statement of internal priorities.

# Value in Relative Priority



## **Resource source selection provides a powerful communication of personal priorities.**

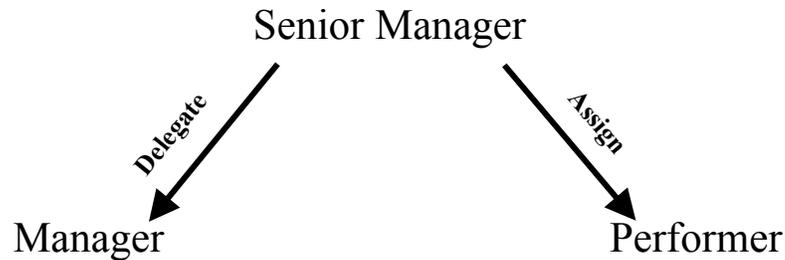
We are developing the information that is necessary to implement and support a work design effort. This is part of the science of management, part of the organization of knowledge that is useful for accomplishing things through others.

Selection of resources, and the strategy that will be used for general management of resources, provides a means to assure a certain level of resources that will be readily available for accepting and performing assignments.

Variations from that level carries its own communication of the importance and urgency of a work requirement.

Going out and getting new employees to work on some assignment carries an unmistakable priority. Calling resources away from other work to do what is assigned carries its own priority. One key to using the assignment function to accomplish work is to take personal charge of resource assignments that affect the completion of what you assign. You then manage cost as well as performance.

# The Command Function



**Assign performances that are important at the command level.  
Delegate unimportant action decisions to subordinate managers.**

**Assignment Decisions Communicate Priorities.**

A manager is in charge of the assignment process, and uses this process to assure the accomplishment of desired performances.

This raises the potential for not doing the assignment process at all, but delegating assignment responsibilities and authorities to subordinates. The decision to delegate is itself an assignment decision of sorts, causing a personal loss of control and authority in order to concentrate on things that are more important at the senior-manager level.

Clearly, if the subject of the assignment is not of personal interest to the senior-manager, it would not be sensible to spend his time and effort doing the assignment and managing the performance. Delegation is an alternative.

Delegation is a communication in its own right, one that tells the rest of the organization that importance is concentrated in other matters. It is a statement of priority.

# **Expertise in Value Generated**

Inability to define product fully.

Assign needed product recommendations to performer.

- Return of recommended characteristics.

Complete product design characteristics.

Negotiate for resources and time to produce.

Assign detail product responsibility & return product.

Manage the performance.

There is a different type of communication that has to be considered in the assignment process, the competence of the process that is employed. The basis for an effective assignment process is an intelligent decision; and making the decision intelligently communicates the importance and priority of the assignment.

Intelligence comes from use of available expertise, and from gathering all information that is necessary and convenient to make an intelligent assignment decision. This necessarily includes cost and benefit analysis supporting the investment of resources in the effort, including self-assigned assignment and management efforts.

The Assignor is the recognized expert in product. If the Assignor does not know what he or she wants, there is little chance of getting it through the assignment process.

If expertise from others is necessary to define a product, gaining that is action for the Assignor who desires to initiate an assignment process.

Product is an expertise that the Assignor brings into the assignment process.

# **Expertise in Return Product**

Additional cost added to performance.

Additional (personal) value to be generated.

Internal performance review is a return product.

Decision Process for return product:

Value of central product, and cost to produce.

Personal value of being in charge.

Need to communicate value clearly.

Need for ongoing control of process.

Personal cost for direct management.

Where the value of a product is often given to a manager as something that they are to accomplish, the value represented by the return product is fully the decision of the assignor. This is the product that will define the management effort above the assignment that assures its performance.

As this value is internal to the process, it is also completely within the authority of the Assignor who manages the assignment process. It is a place for decisions that communicate personal priorities, including those affecting the cost of the assignment to the larger organization, and decisions that require additional performance resources for the purpose of assuring proper management.

Intelligence in selection of internal management-related products is not simply an application of competent science, but is an art form that demonstrates the skills of the manager who determines the product.

Even efficiency of management is communicated. The internal return product adds both cost and value to the central performance.

# **Expertise in Performance Process**

Necessary in the one who performs.

Necessary for the establishment of resources.

Necessary for assignment process.

Decision on Performance Process:

Value vs Cost of the product.

Level of assurance for performance.

Need to assure process inputs.

Level of personal effort needed.

Personal cost for direct management.

The Assignor is not generally the expert in the performance process that will be used, but manages performance by monitoring and controlling its inputs and outputs. The actual performance is left to the one who receives the assignment.

The Assignee is the one who must have expertise in the performance process. Without that expertise, the assignment would be unintelligent.

If the one who is to receive the assignment lacks expertise, then gaining that expertise becomes a subject of another assignment, that must be completed before there can be an intelligent negotiation of resource requirements.

The Assignor may discuss process with the Assignee to assure that the process appears reasonable, and may call in other expertise (as in middle management) to verify his or her own opinion.

Intelligent decision requires that the Assignor has a reasonable expectation that the resources planned for performance are sufficient, and that the product will be generated by operation of the performance process.

# **Expertise in Success**

Determined by product or products generation.

Communicated through assignment process.

Ancillary benefits from success as defined:

Performance requirement is clear.

Management is set by assignment.

Exception management is defined.

Personal efforts are planned.

Cost of performance is managed.

Part of the value in understanding where expertise lies is assuring the success of the efforts which are assigned. Expertise in the immediate definition of success lies with the one who makes the assignment. For our purposes, it is generally determined by accomplishment of the desired productive result using the planned resource base.

In the scientific assignment process, success also includes the internal product that is returned to the Assignor as witness to accomplishment.

Expertise in success also has a communications component. The definition of success has value only as it is communicated to subordinates so that they know what they must accomplish.

The concept of success largely defines the limits for normal performance. The Assignee is to accomplish the productive result using the planned resource base. Where success is in threat, we have an exception situation that can be brought to the Assignor for resolution.

# **Example: Take that Hill**

Authority finds the objective valuable.

Communicate value, and direct accomplishment.

Cost is a secondary concern, go for the value.

Ancillary value in accepting authority.

Weakness: Success evaluated without cost.

Weakness: Lack of information for investment.

Weakness: Poor concept of efficiency.

Inefficiency in our modern authority-based assignment process arises from a failure to manage resources effectively at the level of the Assignor.

In modern organizations, resources are distributed first to those who will later be given assignments. The Assignee then manages the resources to perform whatever work is assigned.

The Assignor, who is primarily interested in the value to be gained, has less interest in efficiency, and has only weak foundation for making investment decisions.

In the example, the officer knows the value of the objective, and can assign the same to a subordinate without fully addressing the cost. For the subordinate, it then takes on additional value because it is assigned by valid authority.

Questioning that authority can even be seen as a failure by subordinate management. The whole management system is founded on proper use of authority, and questioning authority is a challenge to the overall operation of the management system, and the specific instructions of the superior Assignor.

# **Efficiency in Management**

**Efficiency = Value / Cost of gaining Value**

Value is managed by product decisions.

Cost is managed by resource decisions.

**Efficiency is managed  
by investing business resources  
to generate the Product.**

Look at management from the standpoint of management itself. See the situation where a superior manager has given you something to gain through your subordinates. Your performance as a manager is under observation, even as you will evaluate the performance of those who receive assignments from you.

Let us turn the assignment process around, and support your superior's assignment process so that you can perform most efficiently. Your boss needs the same things to manage an assignment as you need. He needs to know the cost and the product if he is to make an intelligent investment in your efforts.

You can support the assignment to you by assuring that there is an agreement on the product to be returned. You can support the assignment by assuring that he or she knows what process you will be using, and the general resources that will assure that your efforts are successful at gaining that product.

The negotiation does not have to be initiated by the Assignor, but may be driven by the Assignee who wants to assure that the assignment is effective.

# **Efficiency in Assignment**

**Efficiency = Product / Cost of giving support**

Value is managed through self assignment.

Cost is managed as time and effort.

**Efficiency is managed  
by investing in Assignment  
to support productive efforts.**

Another concern is the efficiency of the assignment. Where a superior manager has something to gain, he or she is interested in the final result, and the whole cost of gaining it. Assignment, and management of the assignment, are part of that cost.

The superior manager wants to assure that all resources are used effectively, not just the performance resources. The manager is to perform management work, and may supplement performance as necessary and convenient to do so. The workers are to perform work, and are not to be drawn off to support the manager unless situations become exceptional.

Efficiency of management is not just overall cost and product, but the appropriateness of the efforts of those who perform. It may be inexpensive to have the Assignee do the work without further assignment, markedly reducing the time that the Assignee is available to perform other tasks.

The negotiation of performance process is not simply wise, it is good management. It provides the Assignor with a true expectation of the costs that will be incurred, and garners his or her up-front approval for the expenditures.

# **Assigning: Division of Labor**

## **Assignor**

Product to be generated as result.  
Priority of efforts.  
Selecting assignment process.  
Managing the assignment.

## **Support**

Support for assignment process.  
Support for performance.

## **Assignee**

Performance Process to be used.  
Resources required to run the process.

Returning to the viewpoint of the Assignor, we have the concept of division of labor. The Assignor wants to assure that there is appropriate division of labor, so that each subordinate who gets involved in the assignment process performs their own appropriate part. This promotes efficiency of operations.

The Assignor wants to assure that assignment efforts are self-assigned, and will be performed to support the generation of value by subordinates.

The Assignor wants to assure that identifying performance process and resource requirements is fixed on the one who will be required to perform under the assignment.

The Assignor wants to assure that any support personnel who are used in the process receive effective assignment of the part that they are to play, based on the value that they are to add.

The Assignor wants to self-assign management over what he or she assigns.

Efficient and successful performance is largely determined through operating an intelligent and effective assignment process.

# **The Decision to Assign**

## **A Basis for Investment**

The value of product.  
The cost of gaining it.

## **A Basis for Performance**

An acceptable process.  
Available resources.

## **A Basis for Assignment**

An acceptable performer.

In the authority-based assignment approach, the action is initiated by a determination that the value of a result justifies an effort to gain the value.

One of the most important differences with the scientific process is the requirement for established cost and value expectations before any action decision is made. Negotiation based on different expertise assures that good information is available before assignment is completed.

Following negotiation, there is a determination that the cost and value expectations are sufficient to support the action, and an intelligent assignment can be accomplished.

# The Decision not to Assign

Lack of Basis; No product.  
Conditional Products.  
Negative Products.  
Inefficiency: Cost exceeds Value.

## Delegation of Responsibility:

Negative management.  
Conditional returns.

## Management by Policy:

Process, not product.

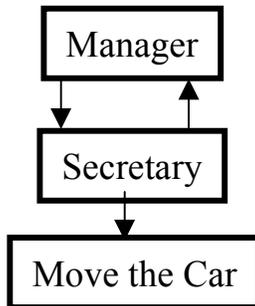
One of the most startling differences initiated by placing the decision to assign after partial process is that there is a potential for a decision not to assign. The finding of value is not sufficient to justify any action except the initiation of the assignment process itself.

When cost is examined, it may be higher than the value produced, indicating that the setting of an assignment would be a poor investment. The assignment process could be abandoned at that point.

There are other situations that cause a decision not to assign. Consider those many situations where there is no real product that can be identified, or where the product is conditional based upon what happens during performance. Clearly, the assignment process, which is based on gaining a product, is not a good way to approach setting such a requirement.

The same is true for negative products, where the real purpose in setting a requirement is to avoid having to take further management action, rather than determining what action is appropriate. The assignment process is the wrong tool, and assignment can be avoided.

# Appropriate Assignment Process



**Value:** moving car out of danger.

**Process:** pass keys to secretary with statement of desired result.

**Product:** keys returned after danger has passed.

We have covered a basic change in attitude that can only be fully understood by the ease in which we address a subject of considerable contention in authority-based management.

We need to look at the art of assignment in terms of adjusting the assignment process to initiate the most appropriate effort based on the needs of the immediate situation.

The Assignor manages the assignment process.

The full process, with formal announcement of product, time for Assignee preparation of process information, and full negotiation, is usually too expensive to even consider. The art of management is in knowing what is appropriate.

The full process was examined for completeness, but is usually to be abbreviated as is necessary and convenient to address the needs of the Assignor in the situation that is before us.

The assignment process requires the application of intelligence; and provides a framework in which that intelligence can be used to efficiently and effectively gain results through the efforts of subordinates.

# Serial Assignments

Inability to make intelligent assignments.

Lack of information - assign gathering.

Conditional - stage work & await.

Need for a plan of action.

Identifying resources or processes.

Investing in improved assignment decisions.

Implementing an assignment management plan.

The concept for a serial assignment is to make one assignment with an expectation to make following assignments. We have addressed this earlier in terms of having what is needed to make intelligent decisions.

If the information is lacking, a tasking can be used to get it. If there is some question about the best person to be given an assignment, collection of that information is also reasonably assigned to a subordinate.

Other assignments are necessary in order to do something else. A design effort must be undertaken on a new product before manufacture can reasonably be assigned to anyone. Serial assignments are a necessary and convenient way to get things done in stages.

Large or complex undertakings are usually planned. The planning has to be completed before it can be implemented. Again serially assigning the planning before assigning plan implementation is just good sense.

Even the self-assignment of an effort to plan out an assignment is a tasking of sorts. It has its own process, resource requirement, and valid product.

# Parallel Assignments

Multiple inter-related tasks.  
Complementary efforts.  
Ongoing serial efforts.  
Single Product from multiple groups.

**Most parallel assignments can be made as serial assignments, and vice versa. This decision provides a point of application for the art of management.**

Parallel assignments are another convenient means for accomplishing more complex tasks through others. It addresses the effort of making multiple assignments as essentially simultaneous parts of the same assignment action.

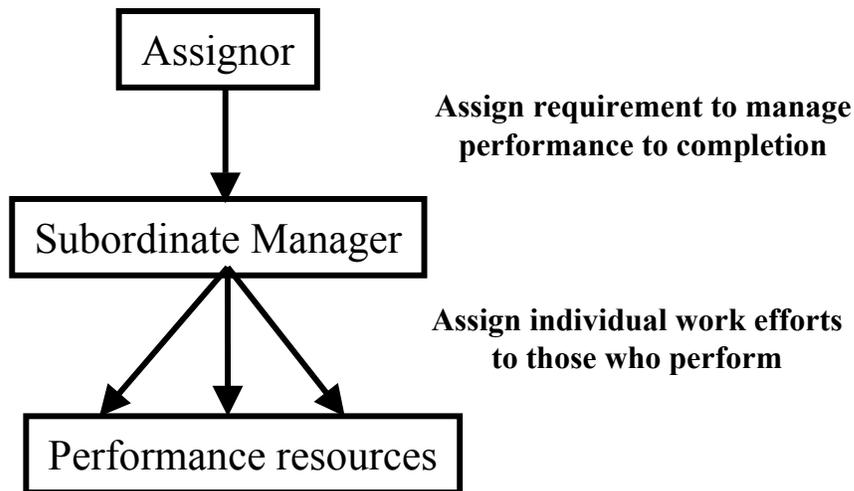
One common application is a foreman setting a production line in motion, where all of the people are assigned their efforts and the overall effort is started up.

A new potential is seen through management science; a parallel assignment of management to a subordinate manager, and performance to specific employees. This provides a higher level of management control for the assignor, at the expense of additional assignment and management effort. It is a means to raise priority.

Another common use is to make assignments involving ongoing efforts. This can be seen in the example at the beginning of the seminar; where there was an across-the-board increase in sales capacity. Any reasonably assigned change to performance would simultaneously affect a number of areas, and the many changes would have to be complementary

Parallel assignment is reasonable wherever there are a number of actions to be assigned based on a single product or effect. The same general effect, however, can be reached serially by assigning final outputs first, and using required inputs to define the new product output from previous processes. The choice is a matter of the management art of the Assignor

# Indirect Assignments



Indirect assignment is an important technique for the skilled manager. It is here that the Assignor is able to assign work through a subordinate without violating the rule against duplicating management efforts.

The key is to separate management into areas of responsibility. In general, day-to-day management is assigned to a subordinate manager, along with responsibility for getting a productive result through subordinates.

The subordinate manager then personally performs what was assigned, the day-to-day management, and the assignment process that will arrange for performance by those who do the productive work.

The initiating Assignor is then an exception manager, and only manages the specific management effort which was assigned. The subordinate manager takes care of performance; and receives productive feedback from those who generate the desired productive result.

Of great importance, this does not justify layering of management. The same assignment is not made serially to subordinates. The one who is assigned to each effort is the one who performs. Management work is not duplicated.

# **Indirect Serial Assignments**

## **Natural assignment to existing work groups:**

- Foreman is in charge of resources.
- Foreman is expert in resource allocation.

## **Common assignment in authority systems:**

- Resources distributed prior to work.
- Work assigned where resources reside.
- Work assigned to authority over resources.

Indirect serial assignments are common in authority systems, but are made without the conscious understanding of a trained manager who can design the effort. A foreman is given tasks to perform, with the understanding that he will direct subordinates to do the work.

This is a normal way of business where resources are distributed to authority centers before there is any work identified for performance. The work is assigned to managers who have authority over workers.

What the science provides is the realization that scientific technique is not reserved for workers, but is just as appropriate for assigning to more senior managers. They can be set to identify subordinates to perform work, and to assign and manage that work to completion. The original Assignor then becomes an exception manager, receiving only such product as is determined in the original assignment, or as might arise as exceptions.

The decision to use this technique instead of specifically identifying those who are to perform, and assigning directly to them, is a matter for the art of management. It involves implementing the vision of the assignor.

One caveat is found in the current management system, where it is now considered good management for the subordinate manager to duplicate the management effort by making the same assignment to his manager subordinate. This will have to be specifically forbidden in order to gain the benefit of efficient assignment. It can be forbidden directly for the assignment made, or forbidden by policy.

# **Indirect Parallel Assignments**

## **Uncommon in Authority Structures:**

- Assign generation of a single product.
- Requires efforts from several groups.
- No one person is responsible

## **The challenge is additional Assignor effort:**

- Direct Assignor effort of coordination.
- Self-assignment of responsibility.

It is also possible to make simultaneous assignments to a number of group managers to the effect that they are to manage their own subordinate's efforts to achieve some singular productive result.

This technique provides a fairly high level of control over the individual productive efforts of each subordinate group, but at the cost of more time and effort at the Assignor level to personally manage the coordination between these subordinate managers who receive the assignment.

It is always possible to put one of the subordinates in charge of the effort as a whole; replacing the parallel assignment with a serial one. That, however, indicates a lower priority on the effort by limiting the personal time and effort expended by the Assignor, even as it may increase the cost of performance by shifting the burden of central management to the subordinate manager who is given central responsibility for the product.

# Negotiation and Planning

Negotiation creates expectations.

Assignment empowers expectations.

Expectation of process is a plan of action.

Expectation of return is a management plan.

Assignment implements the plans.

The process of negotiation is a matter of building intelligent expectations of costs and products. These are fundamental for managing over any assigned performance.

The negotiation establishes that the planned performance process is reasonable, and that the resources can be provided to operate that process with a good expectation of gaining the desired result.

These expectations can be thought of as a performance plan. The assignment that follows based on the expectations is an implementation of that plan. The formal go-ahead on the assignment is a turn-key event.

Negotiation and expectations do not have to be fully formed for the go-ahead. Some of the variability can be handled through conditional or interim feedback products, such as reports or briefings on performance and conditions.

# The Turn-key Assignment

Negotiation develops plans.

Assignment implements the plans.

All the plans are immediately implemented.

Assignment is a turn-key go-ahead for the plans.

Plans can be complex and have many parts.

Plans can involve serial efforts and products.

Plans can involve complex interactions.

In one sense, assignment is always a singular turn-key event. It is a decision to invest resources for the purpose of gaining a valued result. A scientific assignment is one where there is an intelligent investment based on reasonable expectations for costs and values to be generated.

Even where the expectation is for a long-term effort with many interim reports and products, the decision to go ahead with the effort is singular. This is true even where the products are conditional or indeterminate at the time of the decision. The decision is still a single decision to expend resources to gain a product.

The science adds intelligence to the mix. It sees the time and effort of the Assignor in establishing and managing the assignment as part of the cost. It sees the feedback products to the Assignor as part of the consideration for deciding to go ahead with the investment.

The science adds intelligence in the form of management decisions that will communicate an appropriate priority for the work, so that subordinates will be better able to assure the success of the effort. Management decisions also determine exception situations that are properly brought to the Assignor for action.

# **Managing the Performance Plan**

## **General Management:**

- The end product as planned.
- Planned interim products (reviews).
- Planned interim products (staged).
- Planned tracking of performance.

## **Exception Management:**

- Any threat to product delivery.
- Changes to processes or products.

The turn-key aspect of assignment becomes extremely important for large and complex assignments, where a plan of performance becomes a necessity. Value is defined by completion of the plan.

This means that the management of the effort is arranged during the assignment process, and is effectively put in place at the same time as the rest of the assignment. This is a self-assigned part of the same assignment action that gives performance responsibilities to subordinates.

In a large and complex management plan, there can be many interim products in the form of periodic or staged reviews of the performance. These become planned products where status information is a product that is delivered to the Assignor.

Part of the agreement that forms the assignment, is the fulfillment of the management process that is planned as part of the assignment.

Wherever any product is in threat, the performance enters into exception, and there is a basis for going outside the plan for correction. A good plan contains its own definition of exceptions that should be addressed to the Assignor for further action. Any failure to surface such threats becomes a performance failure. The way for the performer to avoid failures is to surface the exceptions that arise.

This supports management by exception. The Assignor can relax interim product requirements where products are clearly defined, and good management is in place to assure the receipt of success or failure.

# **Assigning Resource Supervision**

**Value:** Resources ready for assignment.

**Value:** Resource value enhancement.

**Return Product:** Reports of readiness.

**Negotiating** resources and products.

**Establishing** expectation of cost and value.

**Assignment:** Generate the value.

I am now addressing potentials that do not exist in current management thinking. The most notable is the assignment of supervisory efforts to managers. This includes assignment of resource and process responsibilities.

I address these as very special assignments as the product of the assignment is unclear. Management above the supervision of resources and processes is therefore questionable.

To make these assignments intelligently, as is required for scientific management, there must be a product.

The product is maintenance; it is having the resources and processes maintained ready for use. It is, in one sense, the negative product of not having the Assignor concern him or herself with resources or processes except during assignments. Success is defined by resources and processes ready to support assignments.

The most startling benefit from this is that these aspects of manager performance are then assigned. They have product, and are separately subject to management evaluation. There is a pre-defined difference between success and failure in accomplishing the purpose for the assignment of supervision.

# Assigning Process Supervision

**Value:** Processes ready for use.

**Value:** Process value enhancement.

**Return Product:** Reports and assurances.

**Negotiating** resources and products.

**Establishing** expectation of cost and value.

**Assignment:** Generate the value.

The magnitude of the new potential is staggering. Consider the new ability to manage over process maintenance. The manager who is responsible for maintaining a process is also responsible for regular evaluation and upgrades to the process.

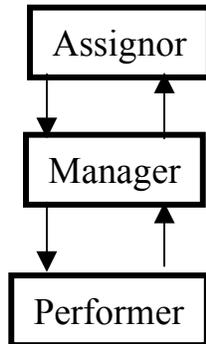
Current approaches, such as suggestion programs, become simply a means for the manager to fulfil his or her own supervisory process requirements. The assignment of maintenance responsibility aligns the interests of the supervisor with the needs of the business for process improvements.

Some token level of process improvement can be assigned as part of the maintenance product. It then becomes the responsibility of the supervisor to find and implement improvements, with a feed-back by demonstration of the improvement.

The startling difference for the senior-manager Assignor, is that this approach to assignment raises the effort now loosely managed through suggestion programs, to the level of product that can be managed by exception. A failure to make process improvements up to the level of the token becomes an exception matter addressed to the performance of the supervisor.

By using the science of assignment, even process improvement becomes a matter that is subject to the art of management.

# Exceptions in Management



**Management Value:** From Performer Process.

**Manager Product:** Indicates support for Performer efforts.

**Manager Exception:** Cost based anomaly.

Product relations in indirect assignments determine the communication that is to be accomplished. The Art of management guides scientific application.

The Assignor determines the product, and gives responsibility for performance to a subordinate manager, along with a feedback product requirement that will support communication of successful performance.

The support manager is assigned the effort of supporting the performance through providing management services to those who perform; and then to the process that they use to assure the generation of product.

Through use of the indirect assignment process, the Assignor is arranging for a team effort headed by the subordinate manager.

The subordinate manager sees to management over, and management support for, the performance effort. The Assignor provides management over, and management support for the subordinate team effort that accomplishes the desired and valuable result that is assigned. Each party to the assignment process has a value-added part to plan in assuring the product.

# **The Art and the Science**

**The Science of assignment provides the framework in which effective assignments may be made.**

**The Art of assignment is how the steps of assignment are used to meet the priority and needs of the one who assigns.**

The science of assignment does not provide a limitation to assignment, but spells out the essentials for making assignments efficiently and effectively. Each step in the process furthers the end goal of gaining product through the efforts of subordinates.

Wherever the science requirements are fulfilled, the effectiveness of the assignment is assured. What remains is given over to the art of assignment. The vision of the one who is making the assignment will determine what is communicated and will communicate how important that assignment is to the Assignor.

The science of assignment provides a framework in which the art of assignment is most effective. The art of assignment provides the use of that framework in order to gain value.

Even the process to be used is somewhat subject to the art of assignment. The steps can be fulfilled as is appropriate, with appropriateness not only determined by the manager, but subject to the value that he or she wishes to communicate to subordinates. The art and science of assignment work together under the management that puts them to use.

# Designing an Assignment

Every decision is an opportunity to communicate values.

Every assignment is a communication to subordinates.

Assignments communicates value to everyone who knows.

The decision to assign instead of contracting sets value.

The sureness of your assignment is a communication.

The consistency of assignments is a communication.

The way you manage assignments is a communication.

Opportunities for the art of management are found throughout the assignment process. This begins with the decision to make an assignment instead of generating value by other means, such as self-performance, delegation or policy.

Selection of product is a conscious means for determining the values that will be gained through subordinates. The ability to make various internal products as part of the assignment adds depth to the management potential.

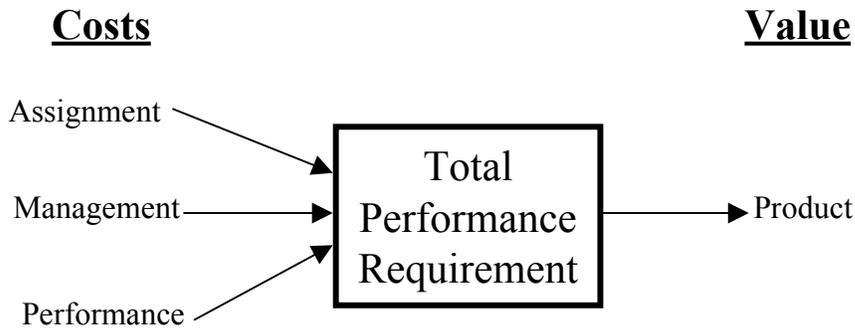
Selection of those who will receive assignment is another opportunity for exercising the art of management. The potentials are as varied as the people who might be given the assignment, and the other work that you have assigned to them.

The negotiation effort which is undertaken communicates its own priority. It is self-assigned time and effort for both the Assignor and the one who receives the assignment. The time to plan and to establish performance potentials communicates value.

The design of management over the performance has its own communication, both during the operation of the effort and by noting completion of its performance.

The message is that the trained manager is in charge of the performance process through managing assignments. The trained manager is able to put the assignment process to use in ways that assure its effect.

# Efficiency of Performance



## **Efficiency relates value to the cost of gaining it.**

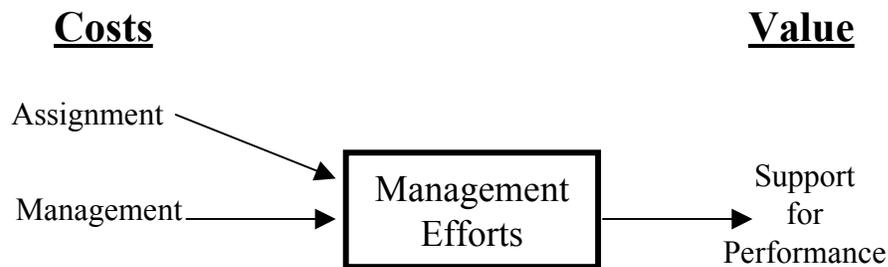
One of the most unusual messages from management science is that efficiency is a guide to effective performance, not a cage in which we operate.

It is fairly easy to establish dollar equivalent efficiency measures for any assignment, including the assignment and management efforts. The internal value relations are far more difficult to address. How much value does it have to the Assignor if the product is only a token of performance instead of the central performance?

Many of the values are personal to the Assignor. All that can be finally said of the investment is that it is reasonable if the scientific assignment process is followed. We will know that the Assignor evaluated costs and benefits, and found them sufficient to justify the making of the assignment.

The same is not true for the manager who is above the assignor. He or she may be more interested in the cost aspects. Hopefully, the Assignor will be taking this into account in the decision process; that there are others who may measure his or her performance based on different evaluation criteria.

# Efficiency of Management



**Efficiency relates value to the cost of gaining it.  
Management costs are personal to the Assignor.**

Of more general interest to the Assignor, there is a measure for the efficiency of management efforts related to an assignment. It has a cost, and it has an internal value.

The cost is the time and effort of the Assignor.

The value produced is support for performance, and is either provided or not provided. If the support is adequate, the basic product will be generated; if not, the productive effort may fail.

The most efficient management may not yield the most efficient assignment. The Assignor should be evaluating the measures to be applied to the assignment process in determining how much time and effort to put into the management of an assignment.

Again, communicating with superior managers on what efficiency should be accomplished in management, and how much management effort might be given to subordinate managers, is a part of the art of management. The science provides the framework, and minimum requirements, which define the limit of effect. The art of management is used to flesh out and give life to the scientific application.

# **Assignment Challenge #1:**

You are being visited by a customer who buys about 20% of your product.

The assignment challenge is one of preparing for the visit, which will be in three days.

The question is one of where you will find value. Once you have the value you intend to accomplish, along with the cost to be incurred, you have the foundation for making appropriate investments in the assignment process. Your answers will differ depending on what you see to have value.

If you have a recognized need for additional information, you will know what to do to gain that knowledge through subordinates. That is a foundation for an investment.

When you feel that you have all that you need, or can gain it through the negotiation process with one who will generate value through an assignment, you can proceed directly into the assignment process.

As noted before, this is much more than simply knowing what to do. What you have received is a way of looking at the concept of gaining through others. You have a framework in which you can intelligently and consistently further both your immediate effectiveness, and your general management over business operations.

## **Assignment Challenge #2:**

In your remote plant, there are employee allegations of sexual misconduct by middle managers.

How will you approach the issue with your subordinates?  
How much will you take personal charge of the situation, and how much will you delegate?

The more options you have, the more potential you have for communicating your own personal vision and sense of value to those who will perform, and to others in the organization.

Where your performance as an assignor is evaluated by others, the assignment application gives a good means of communicating your effort and your skill at managing over assignments.

It is not simply a matter of performance, but of what is appropriate as performance. The art of management is used to provide a framework that will partly define what is appropriate.

The effort goes beyond “what is appropriate” by recognizing that the concept of being appropriate is itself a function of management. There is great latitude given to a manager to establish a sense of value and appropriateness for subordinates through whom work is accomplished.

## **Assignment Challenge #3:**

You have opportunity to invest in owning a good race car, with the potential for advertisement that comes with winning races.

The investment is not tremendous, as it may be shared with other sponsors, and the value of advertisement will vary with the ability of the car to compete successfully.

With current management approach, the lack of information might indicate a problem to be resolved. In the scientific approach, the amount of information is a matter of option, an indication of opportunity.

Decisions can be appropriately made as to whether more information will be required to set a reasonable direction for action. That is a matter of priority and value determination.

Rather than trying to limit personal evaluations based on overall business efficiency, the science provides for evaluations to be the heart of the assignment process. The potential for effective communication of value is foundation for the assignment process.

Best of all, this is not a cook-book recipe for making assignments, but an incorporation of personal understandings of value and cost into a system that supports intelligent investments.

## **Assignment Challenge #4:**

Your sales capacity suddenly jumps to 5% above your current production capacity.

Is it better for you to solicit a means for responding from your junior managers,

or to take charge and tap them for information supporting development of your own unique plan?

The complexities of the process are not in the assignment itself, but are brought to the assignment process by the Assignor, who has a sense of value.

What the process does is to provide a foundation for making the right assignment to gain the value contemplated at a reasonable cost. The investment approach provides for establishing a good and effective management over the process of assignment, and the process of performance that assures reasonable and acceptable results.

It raises a whole new potential for management, addressing the effectiveness of your subordinates at handling the assignments that you make to them. This further impacts on what you will assign to them in the future, and how you view their recommendations for staffing. It garners a new area of management information that helps in assuring an increasing intelligence in using the assignment process.

# **Efficient Assignment Management**

Now able to handle very complex assignments.  
Now able to handle assignments easily.

Next problem: the volume of assignments.  
handling a flood of simple assignments.  
Handling many complex assignments.

The issue is efficiency of Management.

The examples given represent very difficult, very challenging, and very involved issues that will be the basis for assignment.

Consider the ease at which you can now address and handle such matters with both intelligence and foresight. You have the tools to deal with gaining the most involved and complicated of productive results through others, and to gain them effectively and efficiently.

We are then ready to take the next step, managing the assignment process efficiently. This addresses not only the management of the making of assignments, but also of managing over their performance to see to completion.

This becomes an issue when we are faced with hundreds of assignments to make each month, many of which have unforgiving time limits and/or high visibility results that are important to more senior managers.

Managing by products and exceptions provides a means to track and control a massive Assignor workload. We are now ready to address efficient ways of managing that massive workload. We will examine techniques that allow us to use what we have addressed to establish effective and efficient management over assignment as a major part of a management position.

# The Assignment List

<u>Who</u>	<u>When</u>	<u>What</u>
David	01/15/00	Report on facility upgrade with recommended increase in parking
David	01/30/00	Notice of completion of Primer Project
Linda	01/25/00	Advertising copy for upgraded primer product
Bob	01/10/00	Notice that Christmas decorations are down and stored
Peter	01/17/00	Report from Ladies Club presentation
David	02/15/00	Preliminary contract offer for parking lot upgrade

One simple but effective tool is the product list, showing who is responsible for a product, and when and how it is to be delivered. If such a list is consistently maintained, every assignment will be recorded and any missed product delivery will be obvious, and become an exception matter.

This technique is most valuable where there are a large number of assignments with fairly fixed products that can be identified at the time of assignment.

The limiting cost is that the Assignor has to carry the listing around with him or her in order to keep it up effectively. When relying upon the list, every assignment that doesn't get recorded is likely to pass out of obvious management control.

Another limiting factor is the fact that the listing is based on sequential entries. A page cannot be retired from active review until all items on it are completed. If there are long-term assignments, they will force review of many pages of material.

This is a difficult list for anyone except the Assignor to keep, and maintaining the list becomes a personal cost in the Assignor's time and effort..

# **The Tickler File**

## **The Approach is Indicated for:**

- Multiple manager planning.
- Highly involved planning.
- Need for incorporating priority.
- Extended-time product tracking.

## **Greatest Benefits:**

- Lends itself to clerical operation.
- Supports long-term promises.

Another variation is the tickler file, an ordered stack of cards; 3 X 5 cards serve nicely. These cards contain the same basic information as the assignment listing, but are commonly ordered by product due dates.

This approach is appropriate where assignments are involved, or tend to take a long time for completion. It is very convenient where there are many products to be delivered under a single assignment.

Another advantage to the tickler file is that it can be maintained by clerical support personnel. The same clerical worker can support a whole office of those who create assignments.

As the name implies, it provides a means for “reminding” people of when due dates are approaching. Several cards can be kept on one due date, giving reminders of differing urgency to assure that things get accomplished as planned.

The cost of such a system is more in the preparation of the cards than in their management. Often only the Assignor knows what is assigned, and has to fill in the cards him or herself. The cost can be substantial where there are a lot of smaller assignments.

There is an additional cost in communicating information to a clerical subordinate where they are used in the assignment process.

# The Assignment Database

## Primary costs:

- Personal effort to store data.
- Data security issues.
- Need for technical support.

## Primary Benefits:

- Can track more data (performance).
- Easy and sophisticated analysis.
- Interface with communications.

The database approach to tracking assignments comes with different benefits and different costs.

The value is the ability to generate timely exception and management support reports, and to be able to maintain records such as performance by subordinates.

Another clear advantage is the potential for doing things such as tracking assignment workload for subordinates. This comes with an increased cost of tracking, as resources committed would also have to be recorded.

A single database management system might, of course, serve all the managers in an organization. This might come with some costs of standardization.

The cost is not only in the design and implementation of the program that keeps the records, but the cost of maintaining the information system, and the cost of generating special data reports from its stored data. These costs are associated with the system itself, and not with general management.

The potential is there for making intelligent investments in automated assignment tracking, but the value is somewhat speculative.

# **What We have Accomplished**

Performance includes assignment and management.

The Assignor manages the assignment process.

The Assignor manages what he or she assigns.

The Assignor determines if there will be an assignment.

The Assignor manages the cost of performance.

The Assignor negotiates with the Assignee.

The Assignee is responsible for generating products.

We have accomplished the purpose for this seminar, and have gone a ways beyond it.

The first purpose, gaining a common and effective way of making assignments, is certainly fulfilled by the scientific process. Not only is there a “best approach” to the general process, but it is subject to intelligent modification to fit the needs of the immediate situation and Assignor values.

The science is intertwined with actions that use art of management.

The functional test is obvious. When you are faced with a situation that might require assignment, are you knowledgeable enough to seek for a return product? Will you know enough to establish a definition of success and failure so that you can manage the success? Will you address the process and resource requirements appropriately?

The answer is that you will determine what to do by the value you wish to gain, and you will have an understanding of what is appropriate.

# **What We have Not Accomplished**

Efficiency in Assignment, not overall Performance.  
Assignment for structuring organizations.  
Assignment as distribution of value-generating work.  
Management relation to the business environment.  
Situs, the importance of the management module.  
The importance of feudal concepts within management.  
The vertical division of management by function.  
Self-management of manager work-load.

The assignment process is not, in itself, the extent of what we have accomplished.  
There are tantalizing peeks into another level of management efficiency.

We have addressed the assignment, but not what should be assigned to make the operation of the organization efficient.

We have addressed how to assign to get work performed, but not how to use assignment to structure an organization for efficient operation.

There is no mention of modular management, and impact of assignments on the profitability of the organization as a whole.

We have opened a doorway to see that there are vast potentials for efficiency improvement in management that cannot be attained even by the most effective assignment practices.

The scientific assignment process is only one of the techniques that goes into Situs management, the science of management applied to a single manager. Situs management is only one of the concepts that goes into Organizational Efficiency Engineering, the larger study of internal management and its relation to business profitability.

## **Management Science and Business Efficiency**

There was management before there was a science of management, and it was founded upon a family business. The ones in charge hired such help as they needed, and directed them to productive efforts. When businesses grew so large that the one in charge could no longer direct the efforts of subordinates, they hired straw-bosses to represent the owners before the workers.

Business efficiency became an issue in the first few decades of the 20th century, where it was defined as the relation between value of product and the cost of production. It involved time and motion studies, and led to the development of traditional efficiency engineering.

The changes yielded a remarkable increase in efficiency. The changes were in management, and addressed the efforts of the work manager that supported performance. This included eliminating unproductive efforts and simplifying what remained. It included defining work process, training workers, preparing workplaces, designing jigs and fixtures, and setting up and balancing production lines.

Management above the work manager was not changed. The straw-boss approach was continued in middle and upper-level management. Higher management was seen as gaining performance by directing subordinates.

The new management science, implemented through The Management Upgrade Shop, addresses management and support functions as work to be accomplished in support of performance. The senior manager is separated out, and seen as the one who has something to gain through an organization. The performance area is separated out as people who gain that performance. The management system is all that remains, and is approached as how the senior manager gains performance through those who do the work.

The scientific middle manager is in the business of supporting subordinate performances, implementing directives from above, and performing non-exceptional management over business operations.

## **The Source**

Mr. Brogan is a graduate Industrial Engineer with career focus on efficiency. He started in work methods and standards engineering, using stop-watch time study, setting production standards, and improving performance processes. He also worked as a production engineer, doing design of production processes and facilities.

The story of the new science application begins in 1983, with a suggestion for using a low-cost tracking system for small purchases, an idea now implemented through using credit cards.

It was turned down at the Army level by an almost apologetic supply officer. It was recognized as a good idea with several million dollars of potential savings every year, but he was not able to implement. Not only was he unable, but didn't know how to go about finding how it might be implemented.

Mr. Brogan was a journeyman efficiency engineer with well-documented savings. He went looking for why it might not be implemented. By 1984, Mr. Brogan had his answer. It turned out to be blocked by the way that we manage, by inherent characteristics of our management processes and systems.

Mr. Brogan was, at that point, deeper in understanding of inefficiency in management, than those considered today's experts. He had analyzed the functions that caused the inefficiency, and knew what had to happen to become efficient.

The new understanding was systematized by 1992, providing the basis for a management science. His first product, completed in 1993 was training for management efficiency in large and complex organizations. His market research in 1994, indicated that the new management basics were so novel that there was no good way to develop an expectation of value in potential customers.

In continued development, the focus was changed to that of a senior manager who wanted to run a subordinate organization. A four-day seminar for training scientific managers was produced in 1996. It was also put into book form in 1997, but was not published. The problem of being too great a change for communication of benefit still existed.

The Notebook, which summarized past efforts in the new science, was developed in 1998, and was copyrighted.

This assignment seminar was developed in late 1999. It marks the first major benefit that is so obvious to modern managers that it provides a workable basis for investment. It is the bridge between modern management, and the management of the future.

## **Management Upgrade Products**

**The Notebook:** An attractive summary of management science applications in a convenient pocket reference form. Copies are available at all Management Upgrade seminars, or may be procured by sending a check to The Management Upgrade Shop for \$5.00 per copy. Delivery will be made from available stocks. Large orders may be delayed by printing requirements.

**The Assignment Seminar:** A half-day adventure in management science, providing a how-to for making effective assignments, and supporting the assignments made by superiors.

Management Upgrade may be contacted to arrange for delivery of this seminar at your facility. Additionally, seminars will be arranged at commercial facilities in accord with demand. It requires only a few minutes to contact Management Upgrade to express your interest and location.

**Assignment Seminar Package:** The notes, scripting, slides and handout materials are available to members of the Institute of Industrial Engineers.