

# Shaking Off the Myth of Knowledge Work

---

© Fred Nickols 2015



*The worlds of work and management have long been concerned with what Peter Drucker called "knowledge work." But what if there is no such thing? What if knowledge work is a myth? This paper explores those very possibilities.*

# Shaking Off the Myth of Knowledge Work

## Knowledge Work: The Bogeyman of Modern Times

When I was a small boy, frightened that the bogeyman might get me, my grandmother would say to me, “Aw, Freddie, there ain’t no such an animal.” The same is true of knowledge work. Like the bogeyman, knowledge work is a myth. As Rose (1959) defined myth, it is the “result of naïve imagination working upon the facts of experience” (p.12). In this paper I will make the case that knowledge work is a myth. Read on to see why.

## “To Make Knowledge Work Productive...”

Thanks to the writings of Peter Drucker I have been interested in what he called knowledge work for more than 40 years. My interest has centered on what Drucker (1974) termed “the central problem of the knowledge society,” namely, “to make knowledge work productive and the knowledge worker achieving” (p.177). The first and most important thing to know about making any kind of work productive is to focus on the work, not the worker. As it happens, that is also the first step in shaking off the myth of knowledge work.

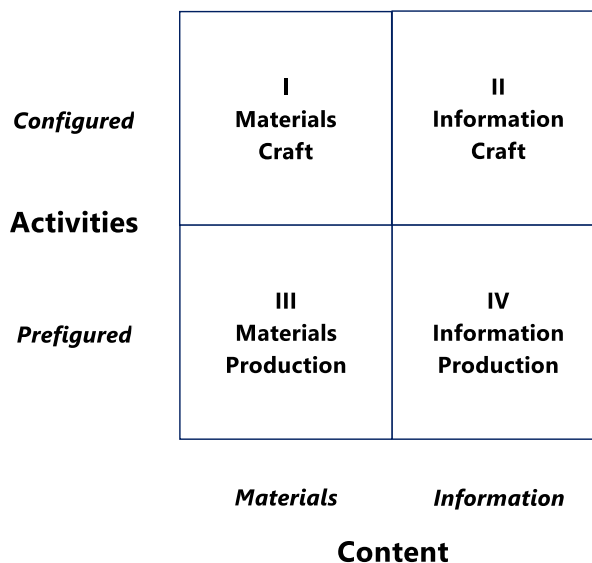
## The Nature of Work

Work is a process; it has a result and it uses and consumes resources. Work is *effective* to the extent that the required, desired or specified result is produced; in other words, the extent to which it yields the desired output or outcome. Work is *efficient* to the extent that waste is minimized – and that includes wasted results and wasted resources. Work is more or less *productive* in accordance with the ratio of output to input (i.e., the ratio of desired results to resources required). Work is made more productive as a consequence of increasing the ratio of desired results to required resources and doing so constitutes productivity improvement. Working consists of the patterned, purposeful activities of the worker, the results of which are intended to satisfy specified requirements. Those results might be outputs such as physical products or outcomes such as sales or decisions made or solutions identified and implemented.

## Categories of Work

One of the key characteristics of so-called knowledge work is that the working activities or responses of a knowledge worker are *configured* in response to the circumstances at hand instead of *prefigured* or defined in advance. Viewed as a process, another important aspect of work is its content (i.e., that which is being processed). The content of all work falls into one of two categories: materials or information.

What has moved center stage in my current thinking about knowledge work and the task of making it productive is the interplay between the nature of the worker’s working activities (i.e., prefigured or configured) and



© Fred Nickols 2013

Figure 1 - Categories of Work

# Shaking Off the Myth of Knowledge Work

the content of the work (i.e., materials or information). Figure 1 depicts that interplay and suggests four basic categories of work.

Each category in Figure 1 is described below along with some tips for putting it to use.

## **I - Materials Production Work**

This category of work is materials-based and marked by prefigured work routines. A prime example is assembly line or production work, hence the name of this category. In this category, the result of the work process is a tangible product; the consequence of carrying out carefully prescribed procedures in accordance with specified standards and often under standardized, controlled conditions. The chief measures of this kind of work are volume and adherence to standard. Pace or speed also plays a role. The degree of discretion available to the worker is very low.

This category of work calls for the classic industrial engineering approach. The work can and should be well defined and well designed in advance. Management should focus on ensuring compliance with these prefigured tasks and procedures and tools such as statistical process control can be put to good use. So can training and the use of job aids.

## **II - Materials Craft Work**

Like Materials Production Work, Materials Craft Work is materials-based and yields a tangible product. However, unlike Materials Production Work which relies on prefigured routines, Materials Craft Work depends on configured work routines. A cabinetmaker making custom cabinets for a client offers one example. A tailor making a custom-fit suit provides another. In Materials Craft Work, the standards might exist in advance or they might be specified in the course of doing the work. In either case, the worker must decide or figure out what to do and how to do it in order to produce the product. Generalized procedures might exist but they must be adapted to fit the circumstances at hand. Worker discretion is high.

Materials craft work depends heavily on the skill and commitment of the worker. Skill development, either through training, mentoring or apprenticeships can make a key contribution to performance. So can selection and hiring of qualified, already competent workers. Because worker discretion is high, a great deal of management is self-management. The organization is best served by focusing on issues related to motivation and commitment and ensuring that the necessary support is in place so that the workers can do what they do and do it well.

## **III - Information Production Work**

Unlike the preceding two categories which are materials-based, this one and the next are information-based. However, Information Production Work has much in common with Materials Production Work because the work routines in both categories are prefigured, which is to say that they require carrying out carefully prescribed procedures in accordance with specified standards. Much clerical work fits the category of Information Production Work, especially that of claims examiners, loan officers and insurance underwriters. The results of this category of work frequently take the form of decisions made on the basis of the information and the prescribed processing rules (e.g., an insurance claim is paid or denied and a loan or insurance application is approved or denied in accordance with certain criteria). These decisions take tangible form in documents but these are perhaps better thought of as artifacts than as the actual work products themselves. Like materials production work, the degree of worker discretion is low.

As is the case with materials production work, information production work can and should be well defined and well designed in advance. Compliance with prefigured working activities is important. Because this is information-processing work, the procedures can be expressed in the form of task sheets,

# Shaking Off the Myth of Knowledge Work

checklists and, most important, decision-making algorithms. That said, what is called for here is still what many would recognize as an industrial engineering approach.

## IV - Information Craft Work

This category of work is also information-based but consists of configured instead of prefigured routines. It is what many think of as knowledge work. Like Materials Craft Work, the worker must figure out what to do instead of simply following prescribed procedure. A computer programmer offers one example. A project manager offers another. A technician troubleshooting a malfunctioning piece of equipment offers yet a third. Financial analysts, researchers, managers, executives and consultants provide still more. Much of the work of salespeople and even executive assistants fits into this category. Indeed, this is perhaps the largest single category of work in the modern world. The worker frequently sets the standards for the work and much of the work itself is indeed performed in the head of the worker where it can't be seen. This category of work also produces outcomes or results (e.g., source code, a completed project, a report to management, a sale). Like materials craft work, the degree of worker discretion is high; in some cases, quite high.

Again, owing to high levels of worker discretion, management must focus on commitment and motivation. Another key focal point consists of the results or outcomes to be achieved. In some cases, the worker is in the best position to define the desired results. In most cases, the worker should be involved in defining them. Management must focus on providing the necessary support and resources instead of engaging in futile efforts to ensure compliance.

The preceding discussion of the four basic categories of work is summarized in Table 1 at the end of this paper.

## It's the Mix that Matters

But where is the much-vaunted knowledge worker and what about knowledge work itself? Well, I've come to believe that both are more fiction than fact, more the result of unchecked assertions and active imaginations than the result of any rigorous investigation. For one thing, all four of the preceding categories of work require people to use their heads or minds and none completely excludes the use of their muscles. All work is some mix of those four categories. All work requires the worker to apply knowledge; all workers are therefore knowledge workers. For another, everyone is in the business of processing or producing knowledge for their own use and consumption. Precious few people are in the business of processing and producing knowledge for commercial purposes.

To illustrate how the mix of work varies, consider the librarian. He might be spotted doing what is essentially materials production work; namely, putting returned books back into their proper places. Clearly, some amount of information production work is involved; to wit: knowing where that proper location is. Then, too, she might be found assisting a library patron frame and carry out some targeted research – a form of craft information work. And, depending on the library's budget, she might have to engage in some materials craft work (e.g., repairing some damaged books).

Most jobs, just as is the case with our librarian friends, consist of some mix of the four categories of work. That said it is also often the case that one of the categories contributes the greatest value and the results of interest for a given job or position. Nowhere is this any clearer than with respect to salespeople. Depending on the products or services involved, they can be spotted carrying goods into a customer's premises; helping set up in-store displays; answering questions posed by buyers; helping resolve after-the-sale service issues; completing sales order forms (hard copy or on-line); and conducting sophisticated analyses of customer business operations in order to identify the benefits of a particular product or service.

# Shaking Off the Myth of Knowledge Work

Don't be misled by assumptions based on occupations or job titles. Consider a project from my consulting days that involved insurance underwriters. The product in question was being launched with the promise of a 24-hour turnaround on approval and there was concern that the underwriters might not be able to meet this standard. So we took a look at their work. What we found was that the underwriters' work had three possible outcomes: they could (1) approve the application, (2) disapprove it, or (3) make a counter offer to the applicant. We also discovered that roughly 80 percent of the applications required no special expertise to approve or disapprove (the decision was governed by the presence or absence of certain medical information). The bulk of the underwriters' work was of the information production variety and it was soon automated, leaving a reduced number of underwriters free to focus on crafting counter offers.

The underwriters' example is also true of other occupations as well (e.g., loan officers and insurance claims examiners to name just two).

In the end, whether you lean toward the mind-muscle or brain-brawn distinctions between knowledge workers and other workers, the truth of the matter is that all workers make use of their minds and muscles, their brains and their brawn. All work is some mix of Production Work (prefigured activities) and Craft Work (configured activities). This is true whether the content consists of materials or information. To make work productive, then, requires determining the mix of work for any particular worker or set of workers and then focusing on the categories that add the greatest value to the employing organization. Organizations are well-served by looking at the work done in their organizations in light of these four categories and ensuring that each category is properly designed, supported and managed.

## **A Final Note**

We know a great deal about how to make all four categories of work more productive and, at the same time, we can make the worker more achieving. But first we must shake off the myth of knowledge work – and that of knowledge workers as well. And, regardless of the category of work involved, we must keep in mind that the worker is a human being. Even in the case of materials production work, simply pushing the worker to work harder or faster will eventually prove to be counter-productive. In all four categories, management must emphasize what Norbert Wiener (1950) long ago called “the human use of human beings.”

# Shaking Off the Myth of Knowledge Work

**Table 1: Characteristics of the Four Categories of Work**

Characteristics	Categories of Work			
	Materials Production	Materials Craft	Information Production	Information Craft
<b>Work Content</b>	Materials	Materials	Information	Information
<b>Work Process</b>	Prefigured	Configured	Prefigured	Configured
<b>Work Result</b>	Tangible Product	Tangible Product	Intangible (Artifacts)	Intangible (Artifacts)
<b>Chief Measures</b>	Volume & Quality	Quality & Value	Volume & Quality	Quality & Value
<b>Means of Control</b>	Compliance with Procedures & Standards	Adherence to Good Practice (Professionalism)	Compliance with Procedures & Standards	Adherence to Good Practice (Professionalism)
<b>Locus of Control</b>	Management	Worker	Management	Worker
<b>Worker Discretion</b>	Low	High	Low	High
<b>Management Focus</b>	Work Design & Compliance	Selection & Support; Motivation & Commitment	Work Design & Compliance	Selection & Support; Motivation & Commitment

## References

1. Drucker, P.F. (1974). *Management*. Harper & Row: New York
2. Rose, H.P. (1959). *A Handbook of Greek Mythology*. E.P. Dutton: Boston
3. Wiener, N. (1950). *The Human Use of Human Beings*. Houghton Mifflin: Cambridge

## About the Author

Fred Nickols is a writer and a consultant. He has published dozens of articles, book chapters and papers appearing in a wide range of professional publications. His consulting practice spans training, management and organization development, performance improvement, process and productivity improvement, knowledge management, communities of practice, strategic planning and, of course, strategy. He served 20 years in the United States Navy, retiring as a decorated Chief Petty Officer, and has held executive level positions in the private sector, including a financial services company, a nonprofit educational company and four consulting firms. Since 2001 he has been the Managing Partner of Distance Consulting LLC.