



Achieving excellence through people and productivity

Management Services

Work
reconsidered

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Work reconsidered: James Pepitone explains an intriguing experiment in which productivity is increased through 'humaneering'.

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Work reconsidered

Increasing productivity with humaneering (part 1).

By James Pepitone.

The 19th century was marked by great achievements in engineering. Advances in psychology, sociology, and physiology should lead us to as striking advances in 'humaneering' during the twentieth century.

*Dr Joseph Tiffin,
The Psychology of Normal People*

Imagine being the executive in charge of a large business. Further imagine agreeing to participate in a 'science experiment' – something about designing work for increased productivity – based on the offhand suggestion of a trusted colleague.

This experiment wouldn't be your organisation's first attempt to improve work design. Your managers have been committed to continuous improvement since the 90's. Thinking back, your people must have tried every popular operations improvement out there, and they achieved significant gains.

Even so, on the people side

of the business many issues continue to consume your managers' time and constrain your operation's results. Productivity is a particularly difficult issue. So you agree to the experiment at your largest operation, advise your manager in charge, and ask to be kept informed.

Now, imagine the experiment underway for only two weeks and being surprised by initial data, which shows a substantial improvement of several key metrics. How could this be? What could possibly yield this kind of improvement, and do it so quickly? Naturally, you want to see for yourself. But first, you do some of your own

research, by asking around and searching online. You learned that this experiment was one of many field trials of the latest version of humaneering – essentially a new architecture for work performed by people – resulting from a 10-year research program by the independent, non-profit Humaneering Institute.

Based in the US, the Institute was founded in 2002 to pursue a vision first articulated in the late 1930s by Dr Joseph (Joe) Tiffin. Dr Tiffin was a Purdue University professor of industrial psychology between 1938 and 1971, and a past president of the Society for Industrial/Organizational Psychology (SIOP), a division

of the American Psychological Association (APA). The Humaneering Institute was funded by an anonymous benefactor and operated as a virtual organisation, depending on the contributed knowledge and assistance of more than a thousand scholars, practitioners, and managers. The challenge was to identify and synthesise all science-based knowledge, relevant to the design and management of work performed by people.

In Tiffin's words "The 19th century was marked by great achievements in engineering. Advances in psychology, sociology, and physiology should lead us to as striking advances in 'humaneering'



during the twentieth century.”

He further explains that the understanding most people have of human nature is “naïve” (p.26) and that this naive understanding has value, but generally lacks scientific quality in five important ways: (1) is replete with hasty generalisations; (2) is disorganised; (3) is comprised of mostly imprecise terminology; (4) lacks effective methodology for problem solving, and (5) doesn’t challenge the problems it creates. He concludes that having more accurate knowledge of human nature would routinely result in decisions that maximise economic performance.

Dr Tiffin’s perceptions proved true. The Humaneering Institute found useful knowledge about human

nature in more than 100 science disciplines, including most human science disciplines (eg anthropology industrial-organisational psychology, environmental sociology); many management disciplines (eg operations management, human resources and organisation behaviour); a few industrial engineering disciplines (eg, work design, human factors, operations research); plus a fascinating array of newer disciplines (eg, complex adaptive systems, behavioural economics and neuroscience). This knowledge was synthesised into a more accurate and up-to-date understanding of how to design and manage work performed by people. Beta-release field experiments are revealing substantial potential for improvement.

When you first visit the site of the experiment, you initially think there must have been a mistake in the figures you received. Only a few subtle changes are evident, and surely these are not enough to create much improvement. If anything, you might expect changes like these to make performance worse.

Your manager in charge chuckles, but only because he had a similar reaction two weeks prior. He says that every one of his managers who came by had a similar reaction.

He explained that the person from the Humaneering Institute said the approach may be difficult to grasp at first, essentially because it involved unfamiliar principles of human nature. He went on to say that having the field experiment on site was fortunate, as it gave us a first hand way to learn about humaneering.

This reminds you that you probably responded the same way when you first heard about the improved results created by production cells

over production lines, just-in-time (pull) production over just-in-case (push) production, Kaizen events over top-down initiatives, and agile over the waterfall approach to project management. It probably took us a while to understand or accept how these new methods produced so much improvement, but once we saw them working in our operation, we had no trouble understanding why they worked.

Before leaving, you ask your manager in charge to pull together a report on the experiment and some insight on humaneering so he can brief your entire team. What you really want to know is his intuitive first impression on how much difference could it make to the business.

Here’s the essence of what he said to the group.

Humaneering is an applied science whose time has come

The physical sciences started a few hundred years ahead



PEOPLE DEPENDENT BUSINESS PROCESS



of the human sciences, and so they were first to be translated into a universal applied science to guide their practical application. Only now are the human sciences sufficient to create an applied science. Furthermore, there is broad agreement among scholars that it is the continued use of engineering-based principles for designing and managing human work that is preventing employers from engaging the full human potential of their organisation members. Work performed by people today is increasingly dependent on human qualities (eg creativity, initiative, concern, and empathy) that arise from human nature. It is the recognition of humaneering's economic potential.

Extend business process design to the job role

The design focus for human work should be the job role (or position), which most business process initiatives stop short of designing. A person's role is the nexus of a human work system with three principle components: the work itself (eg objective, activity, employer relationship, and manager), the worker (an individual), and the internal work environment (eg, culture, other workers, facilities, and people management policies).

Align job roles to the work

Job roles achieve their best performance when aligned to the work to be performed. This may sound obvious, but in many companies

the priority is to maintain a consistent internal work environment across all job roles. This standardised environment may simplify the work of staff functions and management, yet it sacrifices the performance achievable in most job roles.

Differentiate the two types of work

A significant finding during the development of humaneering was the realisation that the two distinct types of work are combined into all job roles each needs to be designed and managed differently. Humaneering refers to these simply as Type 1 (standardised) and Type 2 (adaptive) work.

Type 1 work is that part of any job role for which there is one right way to do the work. People are often trained how

to perform this way, and are expected to complete the work as prescribed.

Type 2 work is that part of any job role for which the worker decides what to do and how to do it. Type 1 and Type 2 work are complementary and often interdependent. Type 2 work requires as a prerequisite, some of the human capabilities essential for performing Type 1 work. (See the table comparing Type 1 and Type 2 work.)

Reconsider the work performed by people

The distinctions between Type 1 and Type 2 work are a critical factor in designing and managing human work to its highest potential performance. Type 1 and Type 2 work require very different behaviour, for which work design and management need

to engage different aspects of human nature.

This may sound complicated due to the complex content of job roles, yet rarely is it because the design process rationally prioritises specific job role content based on its economic value or other management priority. Similarly, current work design and management practices that waste market opportunity or impede economic value creation, once identified, can be targeted for management reconsideration and redesign.

Redesign work for increased economic value

In organisations where the principal operations consist primarily of Type 1 work (eg production, distribution, transportation, and administration), there is a high probability the Type 1 work is effectively designed. For these organisations, improving performance with humaneering will focus on the worker and internal work environment, in addition to any interdependent Type 2 work (eg continuous improvement, teamwork, support services, and development).

It is a different story for organisations whose primary operations are primarily Type 2 work (eg business services, healthcare, hospitality, and professional services). Research by the Humaneering Institute has found that for these organisations about 40% of the Type 1 work is not sufficiently standardised, leading to errors and other waste of resources.

Of greater concern, more than 80% of the Type 2 work in these organisations is designed and managed too much like Type 1 work, resulting in substantial constraints to economic value creation. Adding to this opportunity, scholars working with the Institute roughly estimated that Type 2 work probably

contributes ten times the economic value contributed by Type 1 work of equivalent labour cost. Organisations searching for top-line productivity improvement need look no further than the Type 2 work in any job role.

Align job role components

The work environment within an organisation is second in importance for Type 1 work and third in importance for Type 2 work. For Type 1 work, the work itself, and not the worker, determines the economic value this work contributes to the job role. The work is predesigned for the desired productivity, and the worker's role is simply to comply. In other words, Type 1 work does not allow a worker to add incremental economic value. The best the worker can do is to do exactly as told. For this reason, the work environment needs to directly support the work. If the work environment effectively supports the work, it will have contributed the maximum support to workers.

For Type 2 work, it is the worker, and not the work environment, that is second in importance. Type 2 work is essentially an opportunity for workers to create economic value by responding effectively to an opportunity (eg market need or client need). The economic value of the work is variable (and theoretically limitless), and depends on the effectiveness of the worker's response to the presenting situation. Selecting workers who 'fit' the work has the greatest potential to maximise the economic value created. In turn, the work environment should focus on supporting the worker whose efforts will determine the economic value created.

Solutions are contingent on the situation

The experiment in our operation is testing the impact

of specific changes to better enable our people to do their best work. The person from the Institute said that the experiment could focus on any work that depended on people. I decided on the production cell group manager role, since they have P&L responsibility and their performance has been weak, plus I can't seem to keep people in the job for much more than a year.

He cautioned me about spreading around the specific changes we are testing, because the information could mislead others. He said the changes that will improve performance depend on the initial conditions. If workers have too much autonomy, then we want to reduce it. If they have too little autonomy, then we want to increase it. For us to tell someone that the way to improve performance is to reduce autonomy, we will be wrong in some cases and could do some damage, even though our intent was to be helpful.

The humaneering experiment process has gone something like this. After observing our operation and reviewing the performance data, he came back to me to review his first impressions, and to ask my permission to involve some volunteers from the operation to look more deeply into the situation. After a few more days they shared their thinking with me and got me involved in designing the experiment to simultaneously test a few combinations of changes. Really, the process is not that much different from a Kaizen event, except that he says it's important to test several different solutions. He said human systems do not behave with the linear cause-and-effect behaviour of machine systems.

Final thoughts

Already I can see three possibilities that are a lot bigger than just my operation. First, we should strive to make



CLASSIFICATION	TYPE 1 WORK	TYPE 2 WORK
Terminology	Standardised task <i>Standard work</i> <i>Required work</i> <i>Tasks</i> <i>Physical work</i> <i>Using one's hands</i> <i>Doing</i>	Adaptive response <i>Knowledge work</i> <i>Discretionary work</i> <i>Responsibilities</i> <i>Mental work</i> <i>Using one's head</i> <i>Deciding</i>
Goal and Solution	Clear <i>Predetermined and prescribed to workers</i>	Not clear <i>Contingent on situation and determined by worker</i>
Objective	Assignment compliance <i>Complete assignment as directed</i>	Opportunity capitalisation <i>Maximise economic value derived from assigned opportunity</i>
Sources of Economic Value	Efficiency Standardisation Simplicity Large scale Variation control	Effectiveness Differentiation Sophistication Yield management Variation potential
Complexity	Low <i>Closed work system with identifiable root cause and direct effects</i>	High <i>Open work system with diffused contributing causes and emergent effects</i>
Work System Design Priority Order	1. Work 2. Work environment 3. Worker <i>Work environment should support work</i>	1. Work 2. Worker 3. Work environment <i>Work environment should support worker</i>
Essential Work Attributes	Specific objective Practical workload Told what to do Told how to do it Minimal distraction	Specific opportunity Meaningful job-role Autonomy Response-ability Resources support
Human Reasoning and Communication	<i>Level 1 – Concrete/Physical</i> <i>Level 2 – Rational/Statistical</i>	<i>Level 3 – symbolic/Verbal</i> <i>Level 4 – abstract/conceptual</i>
Desirable Worker Attributes	Endurance Obedience Diligence Intelligence	Expertise Commitment Initiative-taking Creativity

our people more productive by adding Type 2 work to their current jobs. This way they can create more economic value, which is good for the business and good for our people.

Second, I think we can finally resolve our persistent people issues by paying attention to human nature. If the current experiment is any indication, this will reduce the time our managers and supervisors spend on people issues, and we can refocus this time on developing the business.

Third, I was taught that the way to increase productivity was to reduce workforce size. Now I see another way, by increasing the economic value created by our people.

About the author

Dr James (Jim) Pepitone is the Managing Partner of DesignedWORK, a Dallas Texas based management consultancy that specialises in improving the productivity of people-dependent operations and serves clients across most industries and regions of the world. Dr Pepitone was instrumental in founding the nonprofit Humaneering Institute, and currently supports its humaneering field experiments and technology transfer. His career started with ten years in industry roles, including positions as VP of Sales and General Manager for publicly traded companies, and continued as a management consultant. Dr Pepitone is the author of four books and numerous articles, some of which discuss humaneering as it has evolved. His education includes a BBA in Industrial Mgt and MBA from the Univ of Texas at Austin, and an MS in Org Development and Ed.D in Org Design from Pepperdine Univ in California. Connect with Jim on LinkedIn at www.linkedin.com/in/drjimpepitone/ and email him at james.pepitone@designedwork.com. Learn more about humaneering at <http://eanpc.eu/insights/Focus/82>.