

# **Economic vs. Emotional Output: The Value of the Happy Worker in the Hard-Labor Market**

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The concepts of hard labor and of the economic output of a construction company are both understood as fundamental certainties within the construction industry. This text has been written with the intent to illustrate how the worker's positive emotional output--happiness--has a necessary weight upon the construction company's economic output and can be similarly considered as an essential certainty in itself. In part, the Happy-Productive Worker Hypothesis can be evaluated in terms of actual positive results and total firm productivity; specifically, an increase in employee satisfaction and contentment is seen to lead to a following increase in hours spent on the job and a decrease in such items as employee turnover and theft. The definition of the "happy worker" is reviewed through the lens of both the human-resource focused "Oz Principle" and the more business-centered "High Performance Work Practices." Though these two concepts come from differing angles, both offer an emphasis on the importance of worker training and increased communication throughout all levels of the workplace. In conclusion, the resultant effect of the happy worker on the construction industry is seen to be increased productivity across the board--for the workers' personal needs and the business' economic ends.

**Key Words:** Positive Emotional Output, Economic Output, Happiness, Oz Principle, High Performance Work Practices

## **Introduction**

Labor is something that everyone has to accomplish. Work, whether completed in the workplace or at home, is what each individual employs to enact change in the greater world. The majority of the population will find themselves in the workforce at some stage of their lives. And as the concept of hard labor seems to be an inescapable certainty, why shouldn't the concept of positive emotional output (i.e., happiness) be similarly viewed as well? With a world of knowledge and an equal number of opportunities, should there not be some job or a place for everyone that sustains some measure of happiness? But it is here where the economics of the matter and the pure humanity often seem to diverge. An economy is a great behemoth silently guiding the country, unaware of the individuals or of the emotions like happiness. Influenced through market transactions and fiscal or monetary policy, the economy controls the almighty dollar sign. Economists would have us believe that the economic output of an organization and its share-holders, its "happiness," is contingent on the number of zeros behind the dollar sign alone. Therefore, a construction firm's predominant guiding force, according to economic and business theory, is a profit-maximizing principle. Simply put, the firm's business decisions are based on their profit value and their consequential ability to favorably influence the bottom line on an earnings statement. It is not hard to notice this often brutal economic interpretation of the private sector.

However, the numerous market failures of the 1980's, 90's, and today have led to a renewed interest in business practices and their possible contributions to a firm's success or failure. From this renewed interest, several new human resource strategies have arisen, with the purpose to achieve various things, such as influence profit from the ground up, or by one worker at a time. An examination of these ideas will reveal definite positive psychological, or positive emotional output, underpinnings. Though its influence has been distorted through an incomplete application in the workplace, research indicates that positive psychology or its goal, happiness, will play a significant role within the construction company community and during the workers' hours. Particularly in today's hard economic

times, it is essential to ensure that today's business industry, in which we have invested time/training/knowledge into the worker, needs to maintain workers who are loyal to the company in both good times and in bad. It is unfortunate at this point in time that approximately only 20 percent of construction workers are satisfied with their jobs, as compared to the 40+ percent satisfaction rate of the general job market in America (McConnell, 2007). Therefore, this text shall operate as an evaluation of the essential nature of "happiness" and the "happy worker" for the hard-labor market, an example being the worker in the construction industry; and will lend to an evaluation of further research regarding construction worker productivity and motivation as it relates to the worker's "happiness."

## **Current State of the Workforce**

If we ask industrial workers what goal they have for the week or what they are awaiting with the most pleasure, they will probably respond with "Friday" as an answer more times than with anything else. Mihaly Csikszentmihalyi, in his look at flow in the workplace, captured the paradox of work in his conclusion that even though people report some of their most positive experiences at work, they would rather not be at work (1990). This inconsistency between reports of happiness and peoples' wish to actually be in the workplace exposes the plight of the common working man. Most cannot wait to lunge into the weekend, but they are trapped only to repeat the process in its entirety the following week. Therefore, the obvious escape from this on-going loop of drudgery would appear to be happiness achieved at work. In a phrase, happiness is doing what one loves (Myers, 1992). And there can be both several ways to love what one does and an equal number of reasons for achieving said emotions. Unfortunately, unnecessary problems with management, training, accounting departments, supply orders, and countless other incursions into the jungle of red tape all too often discourage workers away from any sort of happiness gained while on the job.

So if most workers would rather be away from work, it stands to reason that their problems with performance and productivity come in all shapes and sizes, starting with "low levels of involvement and organizational commitment, poor performance, low productivity, high turnover and illness" (Garton, June 2008). These reductions in employee satisfaction and commitment can then lead to an increase in employee theft and aggression. The latter portion of this range is of great importance regarding the argument for a satisfied worker. Economists tend to deal in extremes: inflation, recessions, and crashes. And such elements as employee theft and aggression all affect a business' profits before it enters the market. Therefore, this becomes an area of extreme interest to the economists and accountants.

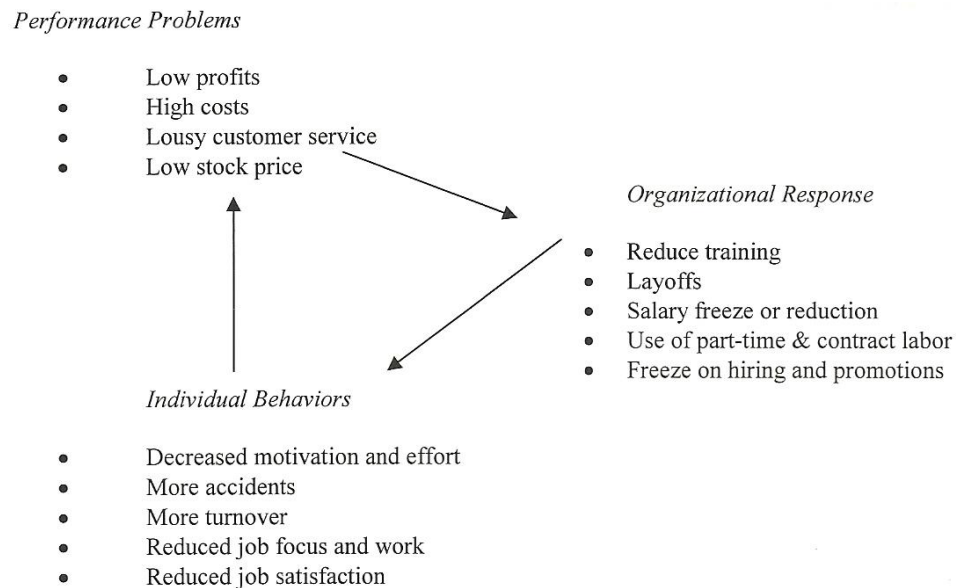
Employee aggression in the workplace takes on many forms. Biting sarcasm, physical attacks, and sabotages of performance are all examples of this problem. Antecedent events, such as frustration with the workplace or stressors of the job, provoke feelings of anger or hostility through hostile and aggressive cognition (Giacalone and Greenberg, 1997). The lack of happiness or positive feelings in the workplace can be seen in either of the stages leading up to the aggressive act. Workplace stressors, or "thieves of happiness," as defined by David Lykken (1999) are a product of a lack of positive thinking from management. These stressors affect the happiness level of employees and only serve to further feed the stressors in the workplace. Quickly, one person's stress becomes the stressor of another, and the dominoes begin to fall. Take the following example:

Imagine an employee whose pet project has been rejected by the boss who chooses another, competing project instead. How does this individual react? Initially, this rejection may trigger thoughts, memories, and images of similar, unpleasant events, feelings of anger, and increased tension or arousal. On reflection, however, the employee may conclude that the rejection was justified, that the employee's project was actually inferior to the one chosen. In contrast, if this person concludes that the rejection was unfair and illegitimate--that the boss was "out to get the employee"--he or she may decide, instead, to seek revenge. Given that he or she also wishes to avoid retaliation for such actions, the employee may then choose to aggress in a relatively covert manner--for example, by failing to deny false rumors about the boss, by withholding information needed by this person, or by taking some action that indirectly causes the boss to lose face or look bad (Giacalone, 1997, p. 49-50).

This example of an aggressive act by an unhappy employee is an excellent example and one that too many might relate to with first-hand experience. This type of act translates directly to decreased company profitability in several areas. Now construction workers are concerned with rumors, false accusations, and thoughts of revenge rather than the successful completion of a construction site or production of a marketable product. Managers, rather than being

concerned with shareholder returns and company performance, are possibly dodging false accusations or squelching employee squabbles.

It would seem that the worst is yet to come. Between 1987 and 1991, more than 85 percent of the Fortune 1,000 firms downsized workforces in the order of 5 million jobs (Giacalone, et al., 1997). And this trend towards a leaner workforce shows no sign of stopping. What this means for the average construction worker is a drastic decrease in perceived job security. By feeling like a mere member of the draft, not knowing when their number will come up, more and more workers have yet another reason not to invest interest or energy in their jobs. This downward performance spiral, where economic contractions only move company interests further away from the worker, drives many companies into the ground as shown in *Figure 1* (Pfeffer, 1998).



*Figure 1. Downward Performance Spiral as a flow from one event to another unaffected by employee orientation or happiness. Note. From The Human Equation: Building Profits by Putting People First (p. 27), by Pfeffer, J., Author, 1998, Place of Publication: Harvard Business School Press. Copyright 1998, by the Presidents and Fellows of Harvard College. Adapted with permission [in process].*

The workplace also has several other landmines, all grounded in a lack of positive emotional output on the part of the individual worker. A more direct manifestation of the aggressive tendencies of an unhappy or aggrieved employee, and of greater interest to CEO's, is theft. This facet alone could easily serve as the catalyst for changes towards a more positive workplace. It is estimated that American businesses suffer losses on the order of more than \$200 billion a year because of employee theft (Giacalone, et al., 1997). Furthermore, such theft is thought to be the cause of more than 30 percent to 50 percent of all business failures (Giacalone, et al., 1997). Not to be explained away with a few grand heists or huge embezzlement sums, these figures are the result of repeated minor instances that accumulate and expand over time and are the byproduct of a history of erroneous management practices (Giacalone, et al.). This problem can affect the construction industry in many ways, as the scope of employee theft is extremely broad, including such elements as the misappropriation of funds, the removal of supplies or information, or even a slowdown in production. All of these acts stem from an unhappy employee seeking to even the score against an organization that has most egregiously stolen that happiness (Giacalone, et al., 1997). Organizations effectively steal happiness, reduce the employees' positive emotional output, and precipitate theft by failing to explain pay cuts, thereby leaving hard-labor workers to internalize the reasons for said decisions, experiencing a resultant lack of dignity and respect. One study found that participants in the experiment stole items of no value to themselves when their supervisors treated them in an uncaring fashion (Giacalone, et al., 1997). Jerald Greenberg, the leader of that experiment captured the call for happiness in the workplace when he stated that "being

nice helps control theft, [and] may be considered one of the easiest and least expensive deterrents one can imagine” (Giacalone, et al., 1997).

## **Happy-Productive Worker Hypothesis**

The Happy-Productive Worker theory is one with a certain amount of intuitive appeal. This theory seeks to correlate the productivity and performance of a worker with their level of happiness. This formula actually is recursive. As such, another aspect of this hypothesis’ appeal is the fact that a productive worker is thought to be happy, to experience the positive emotions of satisfaction and contentment, with their job. So happiness necessarily leads to productivity as well as the other way around (Lykken, 1999).

This idea, however, has not stood up well against the rigorous scientific testing of organizational behaviorists. Evidence has not been found to closely correlate performance with employee happiness (Staw and Wright, 1999). In their study of affect and performance, Wright and Staw assert the possibility that positive attitudes and optimism might be the predictors of performance (Staw and Wright, 1999). Foundations for such assertions include the ideas that optimistic people may set higher and more difficult goals for themselves and when they succeed, they succeed at a much greater level. In addition, people with a positive mood or disposition will attract more friends and associates as well as support from the organization (Staw and Wright, 1999). The latter is an extremely provoking interpretation of the workplace. This opens the definition of productivity to include not merely work or output, but also to be a measure of the particular skill and success with the interpersonal relationships which are so important in organizations (Staw and Wright, 1999). Though their study failed to produce more than one or two significant correlations between affects or dispositions and performance, the idea that the general happy-productive worker hypothesis might not be completely false is revitalized. The most interesting and important piece of information to be found in the study is located in the experimenters’ discussion of possibilities for further research. In this discussion, they highlight that a full departure or reunion with the hypothesis and any further research will be difficult without a more complete manner, combined with an extensive multiple measure of gauging performance. G. E. Ledford, Jr., replied to Wright and Staw’s study with a comment questioning the predictor of the performance variable. Specifically, Ledford questioned the interpretation of a disposition and its lack of a relation to any other psychological construct (Ledford, 1999). Also, Ledford points out that the outcome of the Wright and Staw experiment would be disheartening for anyone seeking to improve performance by increasing employee happiness. If that study were proven to be consistent, only a hiring strategy of bringing in happy job candidates and steering clear of “grumpy” ones would be prudent and even that is unlikely to happen (Ledford, 1999).

The experiment mentioned previously, as well as its resulting comment, both contain controversy circling the definition of performance. This is actually a debate with which economists concern themselves as well, although they have reached a conclusion not arrived at within the field of psychology as of yet. There are basically two ways to evaluate performance--on an individual basis or in terms of total firm productivity. The former is one with which we are all familiar. So often workers are benchmarked based on the number of sales or new files achieved per week; construction workers are often evaluated based on the number of hours put in and the total productivity of the line. This is easily measured and monitored by a small family business or even a regional firm. But once one starts looking at the Fortune 1,000 list, the enormity of the numbers becomes a real problem. How easy is it for General Motors or Ford to measure the individual performance of Bob who works on the drive shaft assembly line in Louisville, Kentucky? Though computers can gather the data, its relevance is insignificant and not likely to find its way onto the desk of any vice-president or CEO. The actual information which will make its way to such desks and to shareholder meetings is a report analyzing the organization’s total performance, including measurements of employee turnover, training costs, shrinkage (losses due to theft), and other firm figures. Looking at this definition of productivity and performance does not require a departure from the former because it takes that into account.

Through a broadening of the definition of productive, to include the measurements listed above, one can return to the Happy-Productive Worker hypothesis as a viable idea. If the introduction of happy worker strategies or aggression-reduction ideas will decrease negative items such as employee turnover and theft, then a happy worker becomes a more productive worker for the company in terms of its positive economic output. The importance of defining productivity in a broader sense transcends just the reconciliation of this one theory. Economists hired by companies to gauge performance and returns on equity are not concerned specifically with the individual worker or

drive shafts that worker has assembled as much as they are with how any worker's departure creates training and replacement costs and how this departure is merely a factor of the company's 35-percent-or-so turnover rate. These large numbers behind that guiding dollar sign are what seemingly affect the company's bottom economic line. But by working to establish career contentment within the workplace, the construction company can reduce the high turnover rate as well as help to satisfy the individual worker's positive emotional needs (Garton). And so the economic and emotional outcomes can be seen to be strongly linked hand-in-hand.

## **Emergent Human Resource Strategies**

Human Resource departments around the world are all concerned with obtaining and maintaining the best people within the organization. Attracting the best people is actually the easiest part of this job, as extravagant recruiting strategies are often used to attract the best people for prospective positions within the company. Once the individual accepts the position and plunges into the workplace, then the work of keeping said person begins. Recently, several new strategies or movements from within the construction management community have arisen that accentuate the role of the individual and that person's relationship with the firm's performance and productivity. For example, the National Center for Construction Education and Research has accepted that a "return on investment from craft training," or an essentially positive economic output, correlates with the "craft trainees' perception of qualitative measures such as motivation and satisfaction" (Cox, Issa, Collins, and Rinker, 1998, p. 2). As the individual construction worker gains in training through the firm, that person's level of contentment with the job increases as does the individual's ability to succeed at the workplace. James J. Adrian emphasizes the use of the "effective supervisor" to maintain the satisfied employee, stating that because labor costs total over 40 percent of total production costs, an effective supervisor must both be attentive to the "needs of his subordinates" and "recognize his subordinates as equals" to maintain productivity (Adrian, 2009, pp.1, 4). It is only with the effective supervisor that the satisfactory construction labor training can be achieved and the more willing worker established at the job site.

On a more general level, one such new strategy is the "Oz Principle" developed by Roger Connors, Tom Smith, and Craig Hickman, within which the accountability and responsibility of both the organization and the individual are highlighted as the key areas of concern. To best understand their conceptualization, one must realize how the authors have related all stages of this strategy to concepts drawn from the movie "The Wizard of Oz." The act of bringing accountability back to the worker is phrased as "Off to see the Wizard: Bringing Accountability Back to the American Character." This marketing fabrication should not deter readers from the content of the strategy. Moreover, examinations of several stages within the "Oz Principle" reveal an emphasis on worker happiness and its possible contributors. The authors note that the American worker is caught up in a finger-pointing and victim mindset (Connors, Hickman, and Smith, 1994). This ducking of responsibility stems inherently from the lack of job security and an inability or lack of desire for any individual to accept blame or responsibility because of the firm's focus on profits and away from the worker (Connors, et al., 1994). Who would not rather pass off the blame of an incident to the entire department rather than risk dismissal by a management team that has proven its disinterest in the individual worker? This strategy advocates a shift to greater cooperation between management and employees when it comes to promotions and pay (Connors, et al., 1994). Rather than wallow in the belief that management does not care and that job postings are unfair because people outside of the firm are most often hired, the "Oz Principle" is designed to encourage the worker to inform management about the worker's individual interests and desire to succeed for the firm (Connors, et al., 1994). However, this can only be achieved when all parties involved, management and the employees, have an understanding and willingness to communicate with each other--devoid of aggression or beliefs that each business meeting is just being held for the sake of having another meeting. With encouragement for understanding and communication built into the "Oz Principle," this strategy is wrought with movements toward improving worker happiness. Direct confrontation of performance needs and improvement of such thorough training and leadership, rather than the mere gathering of data from documents rating some single facet of performance, is the strongly advocated method of this principle (Connors, et al., 1994). Emphasis, however, is on the entire organization. Rather than influence individual worker happiness, this strategy seeks to improve the environment for happiness within the workplace as a whole. Such changes include free conversations between the salaried management and the hourly worker, the ultimate acceptance of guilt and dealing with it there, and also the idea that only through an atmosphere of teamwork and strong leadership will greater profits, both in dollar and employee value, be realized.

This sort of emphasis placed on cooperation and information sharing is proven through scientific research. Wanbarg and Banas looked for predictors of openness to changes in the workplace in their experiment that measured productivity, turnover, and other key factors. Their findings showed that employees who were given more information concerning the changes and the reasons behind this were better able to deal with change and, in turn, actually tended to remain longer with the business (Banas and Wanbarg, 2000). Also, the study illustrated what many positive psychologists have long known--that training increases acceptance of change and lessens employee resistance (Banas, et al., 2000). This study makes the scientific argument for a more people-oriented management strategy--one where the flow of information is not bottlenecked with bureaucracy or red tape discouraging to the worker. An informed and trained worker will move with the changes in the company rather than abandon it at the first sign of change.

## **The Business Case for Happiness**

Inescapable in selling people-oriented management practices to any organization is an enumeration of the benefits as well as the costs of such a commitment. Human resource practices cannot satisfactorily account for all of the performance of a corporate organization, such as a construction company. Extraneous influences such as the cost of inputs or market loads are also deemed to influence performance. But said extraneous influences, the greater economic influences, lead to management strategies and training that further the development of the worker.

Innovative human resource practices are likely to contribute to improved economic performance only when three conditions are met: when employees possess knowledge and skills that managers lack; when employees are motivated to apply this skill and knowledge through discretionary effort; and when the firm's business or production strategy can only be achieved when employees contribute such discretionary effort (Pfeffer, 1998, p.32).

In the end, the amount of effort people contribute to the corporation is relative to management practices, and the hard-labor workers hired typically possess the skills required by the organization. So a strong motivation for the application of this effort and knowledge, is the most important thing for the corporate structure. Studies from five-year survival rates of initial public offerings and research across industries have yielded evidence that "substantial gains, on the order of 40 percent or so in most studies reviewed, can be obtained by implementing high performance management practices" (Pfeffer, 1998, p.32). Special emphasis, Pfeffer indicates, should be placed on the complete and impartial application of such strategies (Pfeffer, 1998). Applying in a truncated manager will result in short-lived or no results at all.

People will work harder because of the increased commitment coming from the growth of the perceived control in the workplace (Pfeffer, 1998). People will work at a more intelligent level based on the facilitation of said people, thereby increasing their knowledge and actually applying it for the betterment of the firm (Pfeffer, 1998). And such high commitment management practices save on management costs and administration overhead by placing more control further down the line and not alienating the workforce (Pfeffer, 1998). These findings are based on sound studies that have taken into account some of the problems with gauging performance, as were mentioned earlier. For example, in a study completed by Mark Huselid in which he surveyed almost 3,500 firms representing all major industries, scales that measure employees' skills and organization structures, and employee motivation were used to measure the effects of management practices on turnover, sales per employee, and the firm's ratio of stock market book value (Pfeffer, 1998). The results, given in economic jargon, definitely paint an attractive picture of business managers.

The magnitude of the returns for investment in High Performance Work Practices is substantial. The *one-standard deviation increases* in such practices is associated with a . . . 7.05 percent decrease in turnover and, on a per employee basis, \$27,044 more in sales, and \$18,641 and \$3,814 more in market value and profits, respectively (Pfeffer, 1998, p. 35).

A subsequent study performed in 1996 using a more comprehensive measurement of the human resource management system found an increase in shareholder wealth of \$41,000 per employee based on one-standard deviation improvement in the HR system index (Pfeffer). Inclusive in these findings are other results indicating that

not only were greater shareholder returns generated, but also more jobs were created by firms that focused on its workers (Pfeffer, 1998). All of these numbers mean one thing--it is profitable to manage people right.

One might be interested in what High Performance Management Practices actually are. Of even greater interest is their relationship with worker happiness and the influence of positive psychology in regards to those practices. As defined by Pfeffer, such practices are high commitment and high involvement (Pfeffer, 1998). Employment security, extensive training, extensive sharing of financial and performance information through the organization, and reduced status distinctions and barriers are all examples of such practices. In total, all of these are easily translated into an increase in worker happiness or even in the happiness of the organization (an optimum level of happiness of all the workers). Robert Cox and his associates offer a superb example of such with the development of survey questionnaires to be employed by construction company management. Through the use of these questionnaires, the upper level management of the "top 70 forms of *Engineering News Record's* top 100 contracting firms" has been questioned to determine the level of employee motivation, satisfaction, contentment, or loyalty (Cox, Issa, and Kablegard, 2005, p. 371). Cox, Issa, and Kablegard noted that the results of this study are in no way exhaustive, as these are based on behavioral indicators and written opinion, but it does translate into a method by which managers can better evaluate construction worker satisfaction and happiness (Cox, et al., 2005).

Over time, hard-labor workers will move from business to business. Each individual's career may involve several firms, and the opportunities for an employee to move on to better pay or a happier work environment are always close at hand. The time of being able to work for one company the entire duration of one's career is over (Collard, Waterman, and Waterman, 2001). The argument for businesses to extensively train and shape employees into resilient individuals, capable of changing with the times, is superb at this point in time, for self-reliant workers are those workers who are ready to re-invent themselves in order to keep pace with corporate changes (Collard, et al., 2001). This type of a worker is only available if adequate training is offered across industry boundaries. However, if only one firm chooses to employ the power of High Performance Management Practices, then even that business will not benefit as much as is possible. As businesses constantly swap employees through the hiring and resignation process, the goal of having a trained and resilient workforce is an important one. This idea places employees and their employers on a different level--one where the employers train their workers and give them important skills that actually develop the workforce as a whole (Collard, et al., 2001). This type of strategy exemplifies how the incorporation of such people-oriented practices may not only affect the profitability of a single firm, but of the health of the entire economy.

## **Conclusion—The Bottom Line**

As Figure 1 illustrated, the common solutions to problems many businesses will face do little to help the construction industry in the long run. Cuts to employee investment and deserved incentives not only decrease the happiness of employees, but they also undercut the company's position should conditions improve. This the spiral continues downward as one problem creates another.

An increased focus on the employee and the employee's positive emotional output stops the spiral in all key areas. Happy workers, perhaps as understood under the Oz Principle or defined according to High Performance Work Practices, will remove lousy customer service as a performance problem. Though it is one of the smaller problems at this stage, one can easily see how it is still a factor that influences all the others. A management team interested in a career-resilient workforce or focused on employee relations will find better organizational responses than the knee-jerk reactions of wage freezes and layoffs. A liquidation of holdings or a realigning of market positions through subsidiary spin-offs are both solutions beneficial to the company and to the employee. And as the Banas and Wanbarg (2000) experiment found, a workforce more informed will react better to change brought on by the previous stages, thus altering the individual behavior. Moreover, a happy employee or one at least satisfied will be less likely to magnify this problematic stage with theft and aggression.

All businesses, including the construction industry itself, are primarily concerned with profit. That employees and their happiness might actually affect this is necessarily a somewhat new concept and one that many may find hard to grasp. The reason most people refuse to accept this correlation is because it is often explained in idealist terms and is also one of the most common reasons for requesting a raise: "Pay me more, and of course I'll work harder." But

rather than to completely disregard this notion at first glance, one could instead take a closer look at company profitability and the employee's influence on that.

Certainly an employee's negative effects on productivity are easy to see. Employee theft and aggression account for a significant portion of businesses failures and also steal earnings in hundreds of billions of dollars a year from firms. If the removal of these problems, as people-oriented business practices would do, had no secondary positive effect, then it would be profitable on its singular value alone. Its profitable effect only magnifies its value. How better to decrease aggression and theft than by improving the happiness of the worker in regards to their coworkers, managers, and the organization as a whole? It has already been proven that the simple act of treating someone with respect and dignity will decrease theft. Would not an increase in positive actions and people-oriented business strategies exacerbate the decrease even further?

Studies of businesses currently implementing High Performance Management Practices have already yielded the economic evidence needed to make this decision. Such gains in production and increases in shareholder wealth need not run contrary to the Happy-Productive Worker theory. Broadening the definition of productivity in this theory actually reconciles the two studies and yields the following: people-oriented business practices (ultimately increasing happiness in the workplace) do increase productivity where it matters--on the bottom line. Further research will then connect the developing concept of the Happy Worker with the specific personal motivation of said worker on the job. This paper serves as an introduction into this idea, and the author suggests further reading of the research of Fredrick Taylor and James J. Adrian to better consider how the Happy Worker could be more adequately motivated to work within the construction workplace. At this point in time a current study of construction students is also being considered to question their motivations regarding the entry-level job market for construction management, with the hope to attract and retain further entry-level recruits through the establishment of base needs, desires, and related productivity.

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