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Book: *The Motivation to Work*, by Frederick Herzberg, Bernard Mausner, Barbara Bloch Snydermann
Originally published in 1959

Response to *The Motivation to Work*

I decided to read Herzberg's *The Motivation to Work* because I wanted to find out what kinds of mechanisms or guidelines people had developed to keep oneself motivated. As someone who will join the workforce very soon, I think that it will be very important to learn this skill. School and university have always provided a guideline and a set of structured and chronological goals that students have to check off, but work is (from my current perspective) much more unstructured and unprincipled. There is no more structure of school semesters or grades or the distinction between professors and students.

We've just discussed motivation in class. We talked about how self-motivation is the best kind of motivation, but did not talk about ways to self-motivate. In particular, we discussed at length Maslow's hierarchy of needs as a useful model for characterizing the duals of needs and motivations. Lastly, we discussed in brief Herzberg's theory of motivation, which is the subject of this book.

In order to have a useful discussion of the book, I will first provide a summary of *The Motivation to Work*. The work is structured as a research paper, for a study carried out by Herzberg, Mausner, and Snydermann: they state the motivation behind the work and the previous work, describe and justify the experimental methods, discuss a set of two pilot experiments, explain relevant definitions, describe the results, and then discuss implications. The work is very well-written, and it appears to have had wide recognition, as is re-affirmed by the Foreword and Preface sections. The Preface was added in the 1993 edition by Herzberg and discusses the prodigious impact of this study since it was originally published.

The motivation of this study is simple: to find what causes job satisfaction. In other words, the answer to the question, “What does the worker want from his job?” Previous studies were lacking in that they did not provide a useful theory. The end results of this study (called the *motivator-hygiene theory*) will prove to be a practical theory that allows for heuristic implementation. In order to get practical results, Herzberg identified the need to examine F-A-E (factors, attitudes, effects) as a single unit. Previous studies had attempted to find what factors affect job attitudes, or try to ascertain the effect of certain job attitudes, but not the combination of the two.

Herzberg notes that there is an ethical discussion on studying motivation. If companies know what motivates or demotivates workers, this can be used to maliciously manipulate workers. (Peter Drucker was a proponent of this view.) Herzberg argues that, while this is certainly a possibility, companies also have many other ways of manipulating workers, and this study has the ability to provide workers with more fulfilling lives. (I am one of those workers aiming for a more fulfilling life.)

The methodology of the study is heavily discussed throughout the study. As motivation is a difficult thing to measure, Herzberg is very careful with the formulation of the study, and has to assure the reader many times that the method of data-gathering (the *semi-structured interview*) leads to satisfactory results. Luckily, he has a background in such studies, having previously performed research studies such as *Job Attitudes: Review of Research and Opinion*, which was the precursor to this work. In particular, notable researcher John C. Flanagan, director of research at the American Institute for Research, promoted a method of *critical events*, in which study participants are asked to qualitatively describe important events in their career. These qualitative results are then analyzed using a method called *content analysis*, which allows for a partial quantization of the responses so that they may be analyzed. Herzberg follows a very similar approach to Flanagan. The people administering the study are given a series of starter questions. For example, Herzberg gives the following example script:

“Start with any story you like – either a time when you felt exceptionally good or a time you felt exceptionally bad about your job, either a long-range sequence of events or a short-range one”
(35).

Afterwards, the researchers are asked to probe the participants on a number of points, such as the objective events (first-level factors) and the psychological reaction to the events (second-level factors), as well as the criticalness of the events. Thus, from these participants, Herzberg gets a series of stories (*sequences of events*), each with the following features: length (*long-range* or *short-range*), first-level factors, second-level factors, criticalness. These form the datapoints for which to analyze. Two pilot surveys were used to refine this method of questioning.

For the actual study, the population of study is nine industrial companies in Pittsburgh. This comprised 203 interviewees. These interviewees are randomly drawn from the pool of engineers and accountants from these two companies, as Herzberg considered these “two of the most important staff groups in modern industry” (34). The above methods are carried out. Then, to determine factors from the qualitative stories, an *a posteriori* approach to content analysis is used to determine a set of factors from the sequences of events (38).

Once all the data is collected, Herzberg is able to identify a number of factors affecting job attitudes. Notably, given the wording of the question, analysis is split into analysis of “high job attitudes” and “low job attitudes,” as it is a key hypothesis of this study that there may be differences between these two. Beginning with high job attitudes, the most common associated factors are achievement, recognition, the work itself, responsibility, and advancement. Each of these are associated with over 20% of positive stories. Other factories that contributed to positive job attitudes but were not as prevalent include job security, personal life, working conditions, company policy, status, possibility of growth, and salary. The key observation here is that the top elements that allow for positive job attitudes are *intrinsic factors*, i.e., ones that relate to the work at hand. On the other hand, the less-

important factors that contribute to positive job conditions are *extrinsic factors*, i.e., relating to the work environment but not the work itself.

Next, we may consider the factors leading to low job attitude. In this case, the relationship tends to be flipped. Extrinsic factors tend to be more affiliated with low job attitude, and intrinsic factors are less correlated. For example, company policy and administration, supervision-technical, and salary were the highest among the associated negative factors. Note that salary may be considered a positive factor, but Herzberg argues that it is more associated with negative factors because when salary alone is a critical factor, it usually means that the person's salary is too low. On the other hand, if salary is increased or leads to positive job attitude, it is usually a byproduct of increased recognition or job advancement, and not the root factor.

So far, we have considered the F-A part of F-A-E. When considering the effects of certain factors (F-E), Herzberg finds an interesting result: if the job attitude is positive, then one tends to experience the same results, irrelevant of what factors cause the positive job attitude. The same is true for negative job attitudes. As a result, effects are largely only dependent on job attitude (an A-E relationship), and not on particular factors (no F-E relationship).

There is a number of other interesting data analyses, but the relationship described above is by far the most prevalent result of this experiment. This forms the foundation of the *motivator-hygiene theory*. This theory states that the factors that tend to cause job satisfaction and the factors that tend to cause job dissatisfaction are largely non-overlapping. Thus the *motivators*, which are largely intrinsic factors related to the work itself, tend to increase job satisfaction. However, not satisfying the motivators will not make the worker very discontented. On the other hand, *hygiene factors*, which are largely extrinsic factors related to the work environment, tend to cause job dissatisfaction when not satisfied. However, satisfying these motivators will not make the worker very satisfied. The word "hygiene" refers to the idea of medical hygiene, which "operators to remove health hazards from the

environment of man. It is not a curative; it is, rather, a preventive ... Improvement in these factors of hygiene will serve to remove the impediments to positive job attitude” (113).

Herzberg compares these to the hierarchy of needs: motivators are related to self-actualization, and hygiene are related to the basic needs. If the basic needs are not met, then one may not be able to feel satisfied, since they are struggling with even economic and regular survival. However, once they are met they serve as a base on which to start achieving job satisfaction. However, to really achieve job satisfaction, one must have the additional case of self-actualization. Without self-actualization, but with basic needs met, one exists in the center layers of the Maslow's triangle, and is neither lacking nor fulfilled.

This mental imagery allows companies to build heuristic models on which to improve job satisfaction. Namely, this comprises the introduction of additional motivators, and/or the removal of poor hygiene factors. Another novel idea proposed by this model is that you cannot put all factors onto a single scale to measure job satisfaction, as there are two sets of unlike factors. Satisfying one of the motivators will have a different effect than satisfying one of the hygiene factors.

We may ask, now, whether this model is still relevant today. And, in particular, whether it is relevant in my field (software engineering). First of all, Herzberg is also sure to take appropriate caution in stating the generality of the results. While the sampled population is that of industrial populations in Pittsburgh, they argue that the diversity in these companies represents a wide variety of professionals in America. However, these are professionals, and in particular accountants and engineers. Both of these jobs involve a mix of intellectual work and standard paperwork. Compare this to front-line service workers or physical laborers, who do not have as many motivators. Thus most of the factors are hygiene factors. And then there are also company officials and leaders, who have primarily intellectual work and can dictate the properties of their environment: these workers primarily have motivator factors. Herzberg states that workers with differing factor profiles such as these may need to be studied separately. However, he notes in the preface that studies following the original work

have shown that the motivator-hygiene theory has stayed remarkably consistent cross-culturally for jobs with a similar factor profile, such as in Japan.

With this in mind, we can start to address the model of modern software engineering, which was a field that did not exist by the time of the original study in 1959. Software engineering is similar to industrial engineering in many ways: it is highly intellectual, but still has the hygiene factors of a typical corporate environment.

We can say that software engineering is a brand new discipline, whose work environments have had the privilege of being shaped by data-driven analytics such as Herzberg's work. One of the distinguishing factors of large software companies today are amazing workspaces with many perks, arguably led by the Googleplex, and followed by other large companies such as Apple Park. These, along with a highly inclusive culture (such as Google's Ten Things¹), are attempts to satisfy any potential general hygiene issues with the workplace. This way, these companies can focus on mental fulfillment by tackling difficult problems. Companies that advertise such exciting perks and wonderful workplaces are willing to invest in tackling hygienes because they know it will pay off. Google probably does many experiments on its workers to discover what benefits lead to the greatest decrease in employee dissatisfaction.

The flip side is to improve motivating factors. With the hygiene factors covered, large companies with nice workplaces can turn to tackling hard and interesting software problems, such as self-driving cars or better data analytics (and the data analytics can help determine motivators and hygienes). I believe that this leads to a virtuous cycle that has led to the blowup of software engineering jobs in these large firms, largely tied to high job satisfaction due to application of Herzberg's principles.

1 <https://about.google/philosophy/>