

MANAGEMENT: MUCH MORE INTERDISCIPLINARY THAN YOU THINK

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Abstract

The discipline of Management is typically associated with schools of business and is thought to be a professional or pre-professional degree. Hence, it is commonly separated from the Liberal Arts and any discussions about interdisciplinary topics. However, the roots of management are in Economics, Psychology and other disciplines with ties across many different subjects. In this paper I go through management textbooks and read the primary sources used for the content covered in various chapters. A significant amount of the citations for the material is from academic journals in Psychology, great works by Philosophers, classic writings by Economists and other areas in the Social Sciences. This paper illustrates the interdisciplinary nature of a subject that is not traditionally thought to be one.

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Introduction

Compared to many other disciplinesⁱ Managementⁱⁱ is relatively new. Philosophy has its roots in Ancient Greece dating back thousands of years. Writings of the great economists goes back close to two hundred and fifty years. Classical thinkers in Political Science include Cicero and Machiavelli going back hundreds and thousands of year.

The practice of management (organizing people and groups of people such as tribes) has been with us since close to the beginning of recorded history. Throughout history, great civilizations (Greek, Romans, etcetera) have grown and declined. A strong case can be made that those civilizations throughout time that were better able to plan, lead and organize (that is, manage) prospered more than those societies who have not.

Writing officially considered to be in management, such as Henry Fayol's *General and Industrial Management*, can be traced to the late nineteenth century (Irwin, 1984). However, much of this early research was comparatively unknown and not recognized and used by scholars until

decades later. Thus, it can be argued that Management did not become a distinct discipline until the first textbook (Drucker, 1946) was published on how management could be applied to large corporations such as General Motors. Though there were a few isolated classes in the area and in the 1920s Harvard offered the first degree in Business Administration. In the body of the paper, I go through two Management textbooks (Jones and George, 2014) and (Daft, 2014), then find and read the original research to illustrate how much of the discipline stems from other academic areas.

Management's Roots in Other Disciplines:

Early thinking and writing in Management was aimed at helping understand, clarify and improve the efficiency and effectiveness of firms that had developed out of the Industrial Revolution of the late nineteenth and early twentieth centuries. Inventors, engineers and entrepreneurs were developing and making automobiles, lighting systems and other manufactured goods. In Shop Management, (Taylor, 1903) developed scientific principles to explain how certain techniques could be applied across different factories so that they could operate better.

These first publications in management tended to view workers as interchangeable parts similar to machines. As the discipline grew it realized that this was not sufficient. As it became more sophisticated it drew on other disciplines, such as Psychology, to help it explain workers behavior and attitudes. Later it became clear that actions of managers have enormous consequences on society, thus the need for ethics, hence the incorporation of Philosophy. The rest of this paper will illustrate Managements ties to, and roots in, other disciplines.

Economics

For the first half century of its existence, Management was considered part of the discipline of Economicsⁱⁱⁱ. But as the world grew, economic growth improved living standards and organizations became increasingly more complex it was necessary for management to separate into its own discipline.

Frederick Taylor was one of the early pioneers of management theory who examined the way in which workers performed their jobs (Taylor, 1911). He used time and motion tests to determine how to best use employees. His focus was on job specialization and the division of labor. Taylor's work examined new factories, but in some ways just refined the work on specialization of the great economist Adam Smith written one hundred thirty years earlier.

Taylor developed various principles to improve the efficiency of factory workers. First he gathered information on what workers did to make

a good. Then he divided the work into small, measureable tasks. Next, he simplified the tasks and organized them so that they followed standard operating procedures. Then he established a base performance level for each of the tasks. The final step was to select appropriate workers and train them appropriately. His methods were implemented by Henry Ford in his production of automobiles.

Organizations do not operate in a vacuum, that is, they are one part of society. The discipline of Management studies not only those factors that impact firms in a direct manner (customers, suppliers and competitors) but also those variables that indirectly influence it. Determining how the state of the economy (unemployment rates, inflation, etcetera), technology, demographics, political, legal, social and cultural factors (officially termed the general environment) plays a major role in the study of Management.

An Evolutionary Theory of Economic Change is one of the many writings based directly in Economics that Management uses (Nelson and Winter, 1982). It provides examples of some of the factors that firms need to be cognizant of. These include, but are not limited to the following. An increase in the unemployment rate will decrease the income of individuals, that in turn can decrease the demand for many firms products. Changes in technology provide both problems and opportunities for firms. In many cases scientific advancements make products obsolete. On the other side, new technology can improve production, such as providing economies of scale.

Aging populations, a higher percentage of female participation in the labor force and a larger number of Hispanic individuals provides many businesses with more opportunities for potential customers. Anti-trust legislation, various laws and regulations restrict what firms can do. In addition, businesses need to adapt to changes in how segments of the population view environmental problems, LGBT issues and other social matters. There is significant research by economists in these areas that management uses.

The discipline of Management also studies how the power of large customers and big suppliers can cause problems for businesses. This area draws heavily from Economics in its study of monopolies (the existence of only one firm providing a good or service in an industry) and monopsonies (only one buyer of a product).

In some situations the line that separates the disciplines of management and economics is almost indistinguishable. Some of the best management theorists (Porter, 1980) are also economists. Research in this area includes how factors such as the level of rivalry between firms, how easy or difficult it is to enter an industry and how the availability of

substitutes impacts firms. These play a large role in the areas of Strategic Management and Public Economics.

Psychology

Early management theorists tended to view workers as interchangeable pieces, robots that would willingly follow orders, thus not necessarily viewing them as human beings with feelings and emotions. In addition, the idea that employees with authority (managers) could be trained to better manage was also missing. It is not surprising that when the discipline grew over time, it borrowed heavily from Psychology.^{iv}

Thus, the overlap of understanding, motivating and coordinating workers with Psychology is very apparent. In addition, there are certain personality traits that enable some individuals to be better managers than others. The connection is so strong that subsets of the disciplines has recently formed (such as Industrial Psychology) that encompasses material that draws heavily, and almost equally, from both disciplines.

A major missing component of initial management thought was realizing the importance of the front line workers. Early research assumed that the managers knew more than the employees actually carrying out the tasks. In preliminary studies (Follett, 1924) argued that it was the laborers who were doing the jobs who knew most about them. The people welding pieces together, on the assembly line and making the good should be included in how to better improve the process. Though it was not fully embraced, and long before it was fashionable this was the beginning of empowerment that has gained much attention recently.

What managers assume about workers and how best to motivate them based on this draws almost exclusively from the discipline of Psychology. In a seminal paper (McGregor, 1960) argued that workers can be classified into two broad categories. On one extreme, managers can assume that typical workers are lazy, they lack motivation and try to do as little as possible. If this is the case, then managers need a strict system of rewards and penalties to ensure tasks are completed appropriately. So firms need to set up a clear system of rules and operating procedures.

However managers may think that the average worker is self-motivated, gets satisfaction from seeing a job well done and will work in the best interests of the organization. In this situation, authority should be decentralized and managers should collaborate with employees to create a work environment that ensures organizational goals are achieved. It should be noted that McGregor was a mentor to Abraham Maslow, the famous Psychologist. So here, the discipline of Management first used Psychology, but then Psychology drew from Management, illustrating that the lines between the two areas practically non-existent.

Research on the importance of personality traits, how aware we are of ours and others and the ability to work within our limitations for managers in organizations also comes from Psychology. The discipline of management classifies five big traits on a scale that impact organizational performance. The ability to get along with others, in the workplace or anywhere else, impacts others around them, including employees (Witt and Ferriss, 2003). Extroversion, the degree to which managers experience positive or negative emotions can impact workers. (McCrae and Costa, 1987). Optimistic managers can coerce and push employees to work harder than they may with pessimistic ones.

Being critical of oneself and others (negative affectivity) can be both a good and bad trait. Workers who are critical of themselves often push themselves to do a better job than those who are not. In addition, as long as it is constructive managers need to point out deficiencies in employees in order for them to improve. Successful firms are often led by entrepreneurs that take risks and are open to new ideas and experiences. Lastly, conscientiousness, being self-motivated and persevering is a very good predictor of performance in most jobs (Witt and Ferriss, 2003).

Sociology

Sociology^v also examines human behavior. From 1924 to 1932 a series of studies was conducted at the Hawthorne Works Plant of the Western Electric Company. It was set up to see how various factors impacted factory workers' productivity. This included the actual work environment such as the level of lighting in the plant, the temperature of the rooms and other physical conditions. It also looked at social variables like the amount of interaction between workers, how workers were supervised by managers, the length of rest periods and reward systems.

The results of the Hawthorne studies were published extensively in books and widely cited in the following decades. Among the findings were that the managers' attitudes and behavior towards their workers significantly impacted work performance. Thus, supervisors could be trained to act in ways that would benefit employee's productivity.

After initially taking the results at face value, they were later scrutinized more carefully by academics and researchers. From Sociology, in one of many articles in the social sciences (Carey, 1967) criticizes the results. He notes that the studies were not conducted following the scientific method of using control groups when investigating the impact of different variables on worker productivity.

None-the-less one of the major conclusions of the studies is still integral to the discipline of management. One of the conclusions was that the behavior of managers is as important in influencing worker productivity

as the physical layout of the work area. Common sense would indicate this to be applicable. This criticism by Sociologists and other Social Scientists spurred the discipline of Management to use scientific methodology when examining organizational behavior.

Philosophy

The moral compass of managers can have an enormous impact not only on workers and the company itself but on many other parts of society with regards to unethical decisions. Practically every week it seems that there is news about a firm where managers are manipulating interest rates, bribing government workers, not reporting safety issues, harassing employees or otherwise conducting themselves in unethical ways. One could argue the effectiveness of it but to try and alleviate the problem every management textbook (Jones and George, 2014) and (Daft, 2014) has large sections on ethics based from Philosophy^{vi} (Boylan, 2000).

In addition, even with completely ethical behavior, when managers in an organization make decisions in many situations some agents gain by it, while others may lose. Developing models to determine how to best make decisions when agents are impacted differently (Jones and George, 2014) stems from Philosophy.

The concept of Utilitarianism was developed by the philosopher/economist John Stewart Mill. For management the general idea is to make decisions that produce the ‘greatest good’ for the largest number of stakeholders. That is something that maximizes the net benefit for the entire organization. Variations of this rule have also been used extensively by economists (using Cost-Benefit Analysis) and political scientists (in determining how to implement laws) further validating the interdisciplinary nature of management here.

Another method for managers to follow to ensure they make the right (ethical) decision is to protect the rights of people most impacted by them. For example, a factory should install safety and health equipment in order to ensure the welfare of these workers who are most affected. This will increase costs and decrease profits for shareholders and also increase the price that consumers pay. In essence this decision ‘harms’ others but is the ‘right thing to do.’ This rule for managerial decision making follows John Rawls and Immanuel Kant (Boylan, 2000).

Managerial ethical decision making can also follow the rule of distributing the benefits and harms of a decision in a ‘fair’ or ‘equitable’ manner. Thus when looking at customers, suppliers and other stakeholders there should be impartial procedures. Thus when employees are evaluated their pay, promotion and other remuneration is based on performance only

and not on their personal characteristics or on favoritism. This rule, also referred to as Virtue ethics dates all the way back to Aristotle.

Antropology

In many situations Management borrows ideas from other disciplines. The research then adapts the subjects and expands on the topics so that it explains how organizations work and can be improved. However, there are a few exceptions to this where research in management has later been used by academics in other areas.

One of the most influential studies in the Social Sciences was conducted in the 1960s and 1970s (and later expanded) for International Business Machines (IBM) (Hofstede, 2001). Most large corporations operate in more than one country, many in fact derive most of their sales from outside their domestic market. Thus, knowledge of the culture of different countries is absolutely essential for Multi National Firms (MNFs).

One way to understand and simplify different countries values and norms is to identify similarities and differences. Hofstede initially did this using a scale system for four different attributes. Though his work lacked theoretical foundations and has many other shortcomings it is useful for businesses across the world helping understand preferences of customers and workers beliefs.

If workers are individualistic focusing on personal goals or if they are more collectivistic thinking about group objectives will determine managers how managers set up groups and how workers are rewarded. How much or little workers respect experience, age, education and titles (power distance) impacts businesses operations in terms of promotion and remuneration. The emphasis on achievement, versus quality of life, in different countries defines work-life balances and time off decisions. Certainly the degree to which employees embrace or avoid uncertainty should determine hiring, contracts and workers remuneration.

Hofstede's work was conducted for managers at IBM and classified here under Anthropology^{vii}. However, Hofstede was trained as a Psychologist and his research has major implications in other social sciences. This just further illustrates the interdisciplinary nature of management and shows that the lines between it and other disciplines is sometimes artificial and often not clearly distinct.

Conclusion

Management is typically placed in a School of Business in Universities. To the general public Management is considered a pre-professional or professional degree, separate from the Liberal Arts and other traditional disciplines. However, if one looks at its history, Management is

very interdisciplinary and has connections to all of the Social Science disciplines.

This paper looks at primary sources and shows that Management once was part of Economics and still uses many of the same topics (just adapted) in its areas. In addition, Management borrows from Psychology in explaining workers behavior. And upon close inspection, Philosophy and other subjects have broad connections to it.

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