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Concepts of Efficiency Implementations: Behavioral and Scientific

By

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Introduction

This thesis examines two key theories designed to promote efficiency in the workplace and progress in society at large. One of these theories was formulated by B. F. Skinner; the other was pioneered by Frederick W. Taylor. Although the two theories share some similarities, their differences are also important. By exploring both the similarities and the differences between these two approaches to workplace efficiency, this thesis will suggest which of the two seems more practical and more appropriate in the modern economy.

The thesis includes an overview of each theory, including the following issues: (1) why each theory was deemed necessary, at least by its proponents, for implementation in the workplace and the home; (2) the main principles of each theory; (3) how society perceived the theories; and (4) an analysis of the success of these different approaches to efficiency. Although each thinker proposed his theory to vastly different audiences, both Skinner and Taylor understood the need for efficiency at work and in the home, and each explained how changing small variables can drastically reduce time spent on tasks.

Today's business world is aggressive. Although business competitiveness has always existed, companies now focus on driving production costs as low as possible by reducing wages, overhead, and the number of employees in an effort to offer their products at prices lower than their competitors, with the ultimate goal of driving competitors out of business. The company providing the lowest price wins success in such respects as a particular business category (for example: frozen foods), prominent shelf display, and consumers' purchases. Capitalism, according to many experts, shows no mercy to workers who are trying to support their families. In order to maximize their

profits, business owners often pay employees low wages for their labor. Owners often cut the number of employees when labor costs are too high, but the workforce is frequently expected to work longer and faster to produce the same amount of goods. Lean management has become the new way of business, although cutting back on waste may mean cutting wages or workers. If an operation's cycle time can be reduced by 0:02 seconds, saving hours of labor in the long run, an employer profits.

The amount of time saved allows companies to produce more products in the same amount of time or allows the employer to decrease his workforce, depending on the amount of demand for the product. Each "time study" conducted by the employer concerning individual steps in a production process allows for continued improvement in efficiencies, which creates opportunities for cost savings to employers. Such analysis is necessary if a business hopes to capitalize on employee efficiencies. However, an employee's quality of work can be adversely affected by maximizing monotonous, skill-reducing tasks. Employees are often expected to produce more work for fewer benefits. The phrase "work smarter, not harder" can be interpreted by an employee as meaning "do not waste time, because time is money." Employees often never reap any profits from their improved labor, causing them to resent management. However, under the correct circumstances and training, efficiency theories can be introduced that will benefit both employers and employees throughout all aspects of society.

The thesis discusses the efficiency theory of B. F. Skinner in particular. Skinner understood the need for efficiency at work and in the home, and he explained how changing small variables in the work process could drastically reduce time spent on tasks.

Skinner was a behaviorist who believed that people could perform less work and still live successful, satisfied lives. However, he also believed that trained behavior is designed to enhance efficiency and that cooperation among most workers is necessary if one hopes to achieve a shorter work day. Skinner propounded his theories most memorably in a novel titled *Walden Two*. Taylor, on the other hand, was a businessman who performed timed studies in manufacturing and production operations to determine how a company could profit from maximizing employees' work days.

Skinner and Taylor thus offered two distinct efficiency methods—one fictional, the other scientific. They addressed different communities of people and, in response, received varying responses and degrees of social success. Both argued for the need for efficiencies in the American workplace and home life if Americans hoped to enjoy satisfaction and success in life.

Walden Two (1948) explains Skinner's beliefs about how a self-sustaining society could exist while each person works only four hours daily. Skinner's novel is the primary text used in this thesis to explain Skinner's behaviorist thoughts on the ways Americans waste goods and time. The successful community described in the novel illustrates the necessity of cooperation, experiments, and analysis to accomplish a fully efficient process of production.

Skinner set his imagined utopia in modern-day America to emphasize his point that efficient lifestyles were both possible and needed in the United States of his day. Skinner wrote during a time, following World War II, when the United States was the dominant economic power on earth and when American workers might be able, in Skinner's view, to seek greater benefits – financial and otherwise – from their jobs. They

might also be in a better position than in the past to change their entire society in significant ways, if they had the imagination to do so. (For a full discussion of Skinner's motives and of the historical contexts of his work, see Altus and Morris.) *Walden Two* exhibits Skinner's theories about efficiencies, how they should be properly implemented in society, and the level of success that positive changed behavior can promote in a society. In his novel, Skinner illustrated time-saving processes in all aspects and phases of life. Discussing the youngest member of the community to the oldest, whether at home, at work, or during recreation, Skinner explains how a community can decrease the amount of time spent on work and still maintain a self-sustaining, satisfied, productive community.

The first chapter of the thesis, pertaining to Skinner's behaviorist methods, discusses Skinner's ideas on the need for trained behavior beginning at birth. Skinner believed that if a person is not trained so that he is able to analyze tasks, understand the harm of wasted time, and determine how to achieve the greatest productivity for the time spent working, he will not be successful in his experimental community of Walden Two. Efficiency, Skinner believed, is a learned behavior. For example, in the society Skinner envisions, children are housed and clothed in a manner that reduces the amount of laundry needed to be done. Each infant is confined in his or her own glass box. By regulating the box's temperature to the ideal setting for each child, the need for clothing or bed linens is eliminated. All children are housed in quarters according to age rather than in family units, allowing parents ample time for work and recreation. In Skinner's utopia, all food is grown within the community; therefore, the food that is prepared is whatever food has been grown by the community itself. If food is cultivated, it is

prepared, providing an abundance of food for all members because no person is required to purchase food and all food is prepared in ways designed to eliminate waste. Dishes are clear, thus eliminating the need for those washing dishes to turn over each piece to inspect it for cleanliness; both sides reveal food residue at once, thus saving seconds from each movement but saving extensive time in the long term. Skinner illustrates how effective methods of production can be incorporated in all levels of society to reduce waste and lost time. No person is too rich, poor, young, or old to contribute to the greater good of the community and in ways that most effectively promote the community's prosperity.

The most important aspect of Skinner's efficiency theory is his four hour work day, the focus of the thesis's second chapter. Skinner (whose spokesman in the novel is Frazier) explains how time is wasted by a traditional workforce, and how, by eliminating an employee's unproductive actions, the same amount of work can be accomplished in less time. Decreasing the length of the work day allows for more "free time." Because community members are trained to be proficient in all actions, extra free time permits opportunities for them to strengthen their artistic interests and skills as well as to pursue their educational advancements. In traditional society, people are not able to expand their talents due to the high demands they face as workers; therefore, Walden Two is expected to produce a higher number of artistic talents because citizens enjoy a decreased work day. Since the novel was based on society in the mid-1900s, women's traditional roles are transformed at Walden Two. A woman is no longer confined to being a housewife but can pursue other interests that can benefit the larger community. Women in Walden Two receive work credits for housework, gardening, childcare, and other traditional

female jobs, but they are also able to choose other areas of interest to gain additional work credits, providing them with feelings of higher self-esteem and greater self-fulfillment.

The third chapter discusses both the successful and failed implementations of Skinner's ideas in Walden Two. Skinner based his utopian society on the ideals associated with Henry D. Thoreau's *Walden* and the Oneida community, a nineteenth-century utopian religious community in New York that practiced communalism with a collaborative, purposeful workforce (Bjork). He was certain that modern society could benefit from a "less is more" philosophy. After the second publishing of *Walden Two* in 1976, people across the country formed communities based on Skinner's philosophy; however, the only remaining society considered a "success" is Twin Oaks, in Virginia. Yet even members of that community found it difficult to apply all of Skinner's theories. Twin Oaks will therefore serve as a model for analyzing the various reasons for the failed implementation of some of Skinner's ideas. Reasons for these failures include lack of trial and error, irreversible behavioral habits, and the existence of too many leaders and too few followers. If Skinner's ideas are to succeed, followers must voluntarily live out the utopia Skinner proposed, committing themselves mentally and physically to the needs of the community. When followers take selfish advantage of the work system, the community fails.

The second section of the thesis focuses on another twentieth-century efficiency theory, this one developed by scientist Frederick Taylor in his *The Principles of Scientific Management*, published in 1911. Taylor illustrates how time and motion studies can help increase production by eliminating wasted effort. As each worker performs a task, he

may be wasting energy in unnecessary movements. By conducting time studies, analyzing worker capabilities, and determining the correct tools needed for each task, an employer can significantly increase workers' production. Taylor explains that each worker may not be suited for every job; therefore, employers should select employees who have the best skills to perform a task and should be willing to train employees on how to properly execute each step of any task. Often, Taylor claims, workers begin "soldiering," producing items at a slower speed to prevent a new quota or layoffs (Taylor 16). Rather than working together to maximize prosperity for both employers and employees, workers often become inefficient.

The first chapter of the second section of the thesis, therefore, examines Taylor's *Scientific Management* theory and the initial reasons he began time studies of the workforce. Like Skinner, Taylor felt that efficiency led to the greater good of the society and that all citizens could prosper both in the workforce and in their homes by becoming more efficient. Lack of efficient processes, he believed, was a waste of human efforts and also a waste of energy, time, and money. If a company could prosper by implementing small changes in its production line, then the employees would in turn find success in less strenuous work and better compensation. *Scientific Management* explains how Taylor's theories of time and motion studies and effective training were implemented in industries in the 1900s.

A part of the second chapter analyzes various implementations of Taylor's theory in the workplace, including his shoveling experiments at Bethlehem Steel Company. Taylor found that employers, by adjusting the workforce and equipment use, could increase production significantly while decreasing the number of workers needed and

increasing workers' daily wages. Taylor believed employees would profit from the success of their employers; however, this was not always the case, as some employers failed to compensate workers for their increased productivity. Moreover, many companies took advantage of the increased workflow by decreasing the size of their workforces, increasing quotas, and maintaining low wages. Dissatisfied workers responded with slowdowns and strikes, which often had a negative impact on a company's production and profits. Unlike Skinner's utopia, Taylor's management system was forced upon laborers and allowed them to be compensated at the discretion of management, a practice which often led to exploitation of workers.

Because Frederick Taylor's principles of management are incorporated in many management journals and business courses nationwide today, the third chapter concentrating on Taylor examines how modern companies use his management concepts when trying to establish organizational behavior. Unlike in the late nineteenth-century when Taylor began his experiments, employers today are more concerned with the operating efficiencies of their employees and how to retain workers long-term through proper compensation and regulated work hours.

The final chapter of the thesis covers the overall realization in the early 1900s, by many groups in America, of the need for efficiencies in order to save time, energy, and money. Although Taylor's book was first published in 1911, Taylor aggressively pushed his time and motion studies during the Depression era of the 1930s, when many workers purposely slowed production to maintain a low quota. By creating a slow work pace, they sought to ensure employment during a time of financial fear. Much of the twentieth century, which was a period of powerful industrial capitalism, military conflict, economic

crisis, social strife, concern about communism, and intellectual conflict, was a period of both fear and hope for many Americans. Skinner's work, like Taylor's, was partly a response to this fear and yearning for hope. Although Skinner's work was originally published in 1948, it did not receive recognition until the 1960s, with the so-called "New Age" civil rights, antiwar, environmental, hippie, and women's movements (Rakos).

Both Taylor and Skinner sought to promote an active, progressive workforce. Yet their theories are not enough to promote such progress. Society must accept and implement overall lifestyle changes if it hopes to become as successful as possible. Even today, people must change their mind sets in order to promote both greater efficiency and a higher morality. However, a change in society to the degree Skinner suggests would require a significant social revolution. Taylor's theories, on the other hand, can be adapted to fit changes in both the contemporary workplace and home. (For interesting discussions of domestic efficiency, see, for example, such work as Frederick's book *The New Housekeeping* as well as Janice W. Rutherford's book *Selling Mrs. Consumer*). Both theories, to succeed, require total commitment by participants, reliance on trial and error, and time for effective implementation.

Part 1, Chapter 1:

B. F. Skinner and the Behavioral Movement

In his novel *Walden Two*, B. F. Skinner sought to explain how America could prosper without overworking employees and still provide satisfying lives to citizens. He hoped to achieve these results by training people to work and behave in an efficient, cooperative manner. Skinner's behaviorist ideas proved especially appealing in the 1960s and 70s, at "a time when environmental forces, most notably the war on poverty and the civil rights, anti-war, environmental, hippie, and women's movements," were causing many Americans to rethink the structure of society and how America should operate (Rakos).

But Skinner's ideas were influenced by much earlier developments. For instance, the boom and bust cycle of the American economy during the late 1800s and early 1900s had caused fear in many Americans who were fighting to provide food, clothing, and shelter for their families. During that time, greedy employers offered wages too miniscule to cover the cost of basic needs. Because employers had a glut of workers at their disposal in a depressed economy, they were better able to increase production quotas by forcing employees to work longer hours at a faster pace. *Walden Two* illustrates what could happen if this exploitation and class warfare ceased to exist and if all people found themselves equal to their neighbors. Skinner believed that a community can strengthen its people by ensuring a stable food supply, adequate shelter, educational opportunities, and medical care enjoyed equally by all.

In *Walden Two*, each person is responsible for contributing to society, even if that person is handicapped by physical or mental disabilities, age, or lack of skills. Requiring

all citizens to work eliminates the need for a few to do the work to support the whole community. If every person works, each person has a physical investment in the community because of his labor. Although there are community planners in *Walden Two* whose job is to oversee the community's structure, no task is too insignificant to be left uncompleted and no person too superior to refuse any task. As Skinner discusses how the community planners determine the value of an hour's work and which professions are essential, he introduces time management studies to better explain the analysis supporting the four-hour work theory. Tasks are analyzed, priority is determined, and time efficiency is examined to assess the community's need for any particular task, and the appropriate time allotted for the completion of the job is determined. Skinner's novel explains how a society can prosper when all men work equally. In such a society, there are neither enormously wealthy persons nor any impoverished people. In conventional societies, Frazier says in *Walden Two,* "a fine suit is a mark of wealth, as well as a means to wealth. A shabby suit is a sign of poverty or a protest against the whole confounded system. Either is unthinkable here" (32). The society envisioned by Skinner must accept fair, equal laws that allow all members to succeed so that the whole group benefits.

For those not born into such a society, new, selfless behavior must be learned. Each person must genuinely desire to develop and change according to the society's expectations. Willingness to decrease physical possessions, acknowledge literal needs for survival, and work together with others are all traits necessary for survival in Skinner's world. To decrease materialistic desires allows one to focus on internal and spiritual desires, discover personal strengths and weaknesses, develop artistic skills, and learn how to rest and meditate. *Walden Two* suggests that less mental stress not only

decreases physical ailments but also lowers a need for medications. Citizens require fewer pharmacists, doctors, and nurses. The supposed needs for standard professions are re-evaluated based on over-all community need rather than individuals' desire to perform any particular kind of work. Rather than working in one field needlessly, one works in multiple fields, meeting both the practical needs of the community and the physical and mental needs of the individual. Skinner advises that no person should work solely with either his mind or his body. Rather, each person should use both to maintain balance individually and as a member of the larger community.

Of course, many people in modern society would find it difficult to learn how to decrease desires for tangible goods, contribute unselfishly to society, and manage their own time. Capitalists have traditionally trained people to want more, to seek self-fulfillment first, and to maintain an overstretched work week if they hope to "succeed." However, Skinner illustrates how success can be found when the need for excess goods is eliminated and one is not ruled by capitalist marketing tactics. By enforcing the "less is more" motto, Walden Two eliminates consumerism, competiveness, material waste, and physical and mental struggles. Food, clothing, and shelter are the only necessary requirements for sustaining life in Skinner's ideal community.

However, contemporary American society is guilty of gluttony because of its focus on consuming excessive amounts of food and goods. Modern Americans live in relatively large homes, with considerable storage space for all their possessions. Still, many Americans possess so many goods that they need to rent storage facilities to store all that they own. In contrast, consumption of food at Walden Two is based on what is seasonal; clothing is worn until it deteriorates; and shelter is basic. Life in Skinner's

utopia is sustained without the extra "wants" that determine existence in consumer-driven societies like our own. As one becomes responsible for his own food, shelter, clothing, and other basic necessities, items become simpler because of simpler resources and talent. Residents of Walden Two must rely on each other for additional provisions. Individualism is suppressed and collectivism is promoted out of necessity. No one person can produce enough agriculture, cotton, and wood to sustain himself without the help of a neighbor. Skinner's community is rooted in ideals associated with primitive societies not corrupted by capitalist greed. The values championed in *Walden Two* were ideals associated with the communes, religious townships, and simpler lifestyles unknown to modern Americans.

To better relate his ideas to his mainly American audience, Skinner places his utopia in modern-day America. He introduces two war veterans, two female prospects, and two intellectuals whose ideas conflict. All six characters are placed inside Walden Two to live together, but each responds differently to the community because of his or her personal background. Some reject the new society, a rejection which implies that many Americans would reject Skinner's ideal utopia. However, the idea is also accepted by some. People who feel the need to maintain their individuality have a difficult time accepting Skinner's communal and collectivist approach toward organizing society.

Part 1, Chapter 2:

An Efficient Lifestyle

Skinner explains the need for living efficiently. From birth to death, he believes, planners should evaluate lifestyles to determine the most efficient manner of living. In Walden Two, every citizen is required to work, and no task is considered too insignificant. Beginning at birth, children are expected to be efficient contributors to society. Instead of sleeping in traditional-sized cribs in a nursery at a single-family home, infants in Skinner's utopia are housed together, divided in separate rooms by age ranges, and kept in individual glass boxes. The efficient use of space begins at infancy. Each box is designed to maximize the efficient use of space and building materials. Because the boxes have individual temperature controls, the children do not wear clothing (except diapers) and do not require bedding. Each child "tells" the nursery workers what temperature is best for him or her through cries or relaxation; temperatures are regulated at around 88 to 90 degrees for newborns and decrease to 80 degrees at six months (Skinner 87). The children are introduced to environmental annoyances slowly, according to their tolerance levels. Rather than being subjected to constant annoyance to tire them into acceptance, children in Walden Two become more resistant to annoyances.

Nursery workers in Skinner's ideal society are often mothers of some of the children; however, parents are not required to tend to their own children. Parents are able to continue contributing to society in their own areas of interest, and they also have social and recreational lives apart from their children since childcare is provided at all times by the community. Instead, parents "visit" with their children: "Children are cared for in the same way regardless of the age, experience, or earning power of their parents," thus

promoting a sense of equality among the children from birth (121). By caring for all infants in a common room, workers are able to train the children in the ways of Walden Two. Rather than each parent being responsible to his or her child or children while juggling personal and professional duties, others teach the children the manners of life. According to Susan Day's commentary on Walden Two, "group care of children and an altered family ideology have allowed a scientific method of raising charming, independent, self-controlled children" (Day). However, lest anyone worry that this method of child-rearing detaches children from their families, Frazier has an explanation: "The average member of Walden Two will see more of his descendants than the very exceptional member of society at large. And every child will have many more living grandparents, great-grandparents, and other relatives, to take an interest in him" (Skinner 123). But since every adult member of Walden Two is living a fulfilling, productive, secure life, "What the child imitates is a sort of essential happy adult" (134). Parents, in other words, are not a child's only positive role models.

Skinner, then, has applied scientific time management principles to rearing children. By decreasing the number of members of society responsible for each child from a ratio of one adult per one child to one adult per room of children, Walden Two allows parents more time to devote to the production of goods. Children are raised in the same environment, with equal exposure to external elements creating a greater opportunity for standard educational and social advancements. Child-rearing in Walden Two thus contrasts with the ways modern Americans raise children in varying socio-economic classes and with inconsistent exposure to environmental advantages. The modern American method of child-rearing results in an unbalanced and inefficient class

system. Children in Walden Two, on the other hand, are raised in a school-like environment, thus ensuring that each day's time is spent solely caring for the children. There are no disruptions caused by a guardian's professional, recreational, or personal obligations. Skinner proposes an environment that produces children "free of jealousy, resentment, irritability, aggression, [and] selfishness" (Day).

In the novel, Frazier explains that there is no need for negativity at Walden Two because community members enjoy equality and freedom of choice. They have no need to "struggle for existence" and feel anger, fear, rage, or jealousy caused by unequal circumstances (Skinner 92). Food, clothing, and shelter are all provided free of charge within the community in exchange for four work credit hours daily in a necessary area of production. To help create these ideal circumstances, every person contributes equally and no work effort is wasted. Any food that is cultivated must be prepared and eaten, and Skinner indicates that an abundance of crops exists at Walden Two because of the large number of members who work to produce them. Since no food is wasted or set aside to spoil, members receive an abundant amount.

This system eliminates the hunger and starvation common in traditional society. Frazier explains that "it would be no achievement whatsoever to make an equally delicious loaf of bread with less butter or cheaper starches," because those ingredients would then have to be used in other dishes to prevent the surplus from spoiling (41). Instead of trying to produce the most nourishment with the least number of ingredients, Walden Two cooks have the opposite problem: they must create dishes with the most ingredients, all produced within the community. Efficiencies continue from food production to food presentation. Serving trays are designed to be efficient both when

people retrieve their food and while the dishes are being cleaned. The trays are designed with divisions—large for the main course, small for side dishes, and one central division for the drink. When placed on the tables, trays are not intended to sit parallel to one another; instead, they are arranged "spokewise around the table, so that [members can] have the main dish conveniently in front" of each person, with the remainder of the meal easily within reach (41). Also, because the trays are clear, dishwashers save numerous hours of labor. Traditionally, dishwashers would flip trays over to ensure that both sides were clean. However, transparent dishes eliminate the wasted step and wasted time, saving seconds per task but hours overall. The eating schedule is also structured to benefit members by avoiding wasted time and space. Walden Two's cafeteria-style setting creates a self-manageable system allowing members to receive plenty of food in the most efficient manner without overcrowded areas. A staggered eating schedule means no worry about finding available food and no need to dine with crowds or wait in long lines.

The staggered schedule is not only incorporated into the eating schedule but into all schedules at Walden Two. Recreation schedules include many activities during small allotted times throughout the day. As Frazier explains in the novel, "With a staggered schedule we . . . can avoid strong preferences for certain performances at the theater or for the use of the tennis courts or for working hours" (38). Staggered schedules, in other words, allow all facilities to be used almost continuously, without wasteful "down time." Since each Walden Two member works only four hours daily, there is ample time for daily recreational events. For instance, in a traditional society a playhouse may present just one play each week, and the play may take several hours to perform; however, at

Walden Two, such events often take less than one hour. Frazier explains that since people need no money, lengthy events are unnecessary. In traditional society, people expect long programs in order to feel that their attendance was worth the value of the ticket, their transportation, and their time. At Walden Two people can enjoy shorter programs because costs in time, money, or transportation do not exist.

Because time is so well managed in Walden Two, members of the community actually have *more* time for leisure activities. At one point, for instance, Frazier mentions the pressure people are often under in conventional societies. This pressure might include

> dressing in the usual rush, after driving home from a late appointment at the office through rush-hour traffic to reach a dinner party in time for cocktails. [But there is none] of that here, you see. We have plenty of time for everything. We like a break between the active part of the day and the quieter social hours at dinner and in the evening. A bath and a change are an important point in the day's schedule. They are psychologically refreshing. (31)

Citizens of Walden Two have also been trained to behave differently than people in modern American society. For example, they consider a single, foot-long, white poster filled with black text as stimulating as a ten foot colorful poster would seem to members of the outside world. Frazier explains that "excitement is a conditioned reflex," and real excitement should result from the event itself, not from prior advertisements (77). The elimination of photos, fonts, and colors might devastate many real-life marketing directors, but the use of traditional media does not draw in crowds at Walden Two. Instead, people are aroused by simple notification of the forthcoming event. If an event

interests many in the community, it is repeated several times until all have seen it. In today's society plays are performed on multiple nights, and movies are available for months at a time to increase revenue. In contrast, in Walden Two each repetition of a movie or performance results purely from necessity. If a play or movie fails initially, it is not shown again. The amount of time, energy, and resources wasted on recreation in a traditional society is not wasted in Skinner's utopia.

Above all, Skinner creates a society rooted in equality. For example, championship sports matches, which are million-dollar spectator events in modern American society, are unnecessary in Walden Two since no man is a "hero" to the masses (35). No fees are charged at sporting events, since referees, food, and venue are paid for by communal funds. Neither recreational events nor dining should require "elaborate space and equipment which stand idle most of the time" (37). In traditional societies, eating and recreation waste money, space, and time. But Skinner has also created academic efficiencies. To reduce the time wasted by professors giving repetitive lectures, materials are printed and distributed only to those interested, eliminating the need to instruct those who have no desire to study the topic and allowing those interested in learning the topic the opportunity to do so on their own time and at their own pace, as in independent studies and online classes today. At one point, Skinner has Frazier explain this new system in language that becomes a bit heated:

> "We solve the problem of the lecturer by dispensing with him. The lecture is a most inefficient method of diffusing culture. It became obsolete with the invention of printing. It survives only in our universities and their lay imitators, and a few other backward institutions." He glared at Castle [a

> visitor to the commune]. "Why don't you just hand printed lectures to your students? Yes, I know. Because they won't read them. A fine institution it is that must solve that problem with platform chicanery!" He made an effort to control his growing contempt, and went on more quietly. "Perhaps something can be said for an exhibition, for the antics of the speaker, and I know about 'audience participation.'" (36)

No time is wasted in Skinner's ideal society. Lectures waste time; therefore lectures are eliminated.

Not only can individuals be wasteful but so can crowds. As Frazier explains, crowds

> are expensive. They demand elaborate space and equipment which stand idle most of the time. Look at your stadiums and theaters [he says to Castle]—or restaurants, for that matter. Here things are different. We simply stagger the daily schedules of our members. As a result our equipment is, in many cases, almost constantly in use. We can do this because we aren't bound by the timetables of stores, businesses, and schools. 'From nine till five' means nothing to us. You will find us breakfasting anytime between five and ten in the morning. Luncheon begins immediately thereafter and lasts until midafternoon. The children have definite hours, on the early side. Adults dine as early as five-thirty or as late as nine. Our dining rooms, Mr. Castle, seat about two hundred. As you will see in a moment, there are no large rooms and no crowding." (37)

By describing the staggered scheduling implemented throughout Walden Two, Skinner illustrates how inefficient and costly crowds can be to a society and how training people to be stimulated by fewer popular attractions can save time and resources.

Part 1, Chapter 3:

A Four-Hour Workday

In *Walden Two,* Skinner presents ideals of simpler living to a world of modern consumers. He creates a utopia in which the need for community members to earn a monetary living is eliminated. Negative emotions, he believes, dissipate when money is no longer necessary for survival. An equal standard of living is established for all people as a step toward eliminating competition among neighbors. Communal living reverts back to the kind of living found in early civilizations, when families were self-sustaining and bartered for goods they were unable to produce. Skinner scales down America's exaggerated idea of need in his novel by focusing on basic human needs—food, clothing, shelter. Consumerism, he thinks, fuels artificial desires and capitalizes on the tendency of humans to covet their neighbors' possessions. Marketing strategies created by capitalists convince consumers to purchase products to enhance their way of life. Americans are trained from birth by capitalists to desire an excess of tangible goods that are not necessary. A "more is better" mentality has created a modern American society of constant consumerism.

Skinner explains in *Walden Two* how a "less is more" approach is beneficial to individuals and to society at large. Elimination of unnecessary desires results in the decrease of monetary needs. Skinner illustrates how the significance of money decreases when excess options disappear. Money feeds greed. When money is also eliminated, people are able to work as one unit instead of as individual competitors, and less work is required per person.

Some of Skinner's ideas already seem to have become popular in modern society. In today's workforce, for instance, employees look for efficiencies that allow them to finish a job quickly if they are being paid per task or by the hour. People often want to be entrepreneurs so they can be their own bosses and choose their work hours and working conditions based on their own personalities, strengths, and weaknesses. An independent worker can reduce the hourly or daily workload requirement if a task is too daunting and if he is able to determine his desired process flow to create a more satisfying work environment. Skinner explains how a society can benefit from all citizens independently working as "self-employed," determining which tasks they prefer and are best at and what time of day they prefer to work, thereby diversifying the work to prevent decreased efficiency due to monotony. Each worker, therefore, can determine how he can best contribute to the overall needs of the community.

Although there are planners, managers, and scientists who oversee labor to assure that the proper amount of work is done to maintain the community, the positions are not appointed by a government voted for by the people. Skinner, speaking through certain characters in the novel, explains how behavioral psychology is able to restructure society to run as a communal environment, ungoverned by a hierarchy, and providing equal opportunities to all members. Rather than forming a government of elected officials who campaign for their authoritative rights to pass legislation, citizens of Walden Two choose six planners to make decisions for the overall well-being and sustainability of the community during appointed terms. When appointing a planner, two individuals from the community are chosen by managers, and the names of those individuals are presented to the planners, who make a final decision. Planners do not campaign for the positions

but are chosen based on their overall concern for the success of the society. In order to keep fresh minds in the planning process, a planner is not allowed to serve for more than ten years. Often in traditional society, elected officials hold their positions for a lifetime, and their abundant time in office makes them powerful decision leaders. Wealthy business owners then have the opportunity to bribe these long-time leaders to pass regulations that aid business over labor. In Walden Two, three men and three women serve as planners at a time, thereby providing a more realistic insight into all areas of society and exemplifying the ideal of social equality.

Planners are the only members in the community appointed to a position. Managers rise to their positions, much like in some businesses today, and must be trained and tested in their fields of specialty before being placed as managers. Those who specialize in a specific area, such as education, food, health, and arts, may seek managerial positions; but they also must have a genuine care for the welfare of the people and a desire to preserve the structure of the community. No one is addressed by his or her title, thereby maintaining equality among members and suppressing power struggles. Feelings of superiority in the workplace are thereby prevented.

By eliminating a system of government and creating an equal work environment, Walden Two is able to avoid the conflicts between labor, business, and government which often occur in traditional society. There are no government officials to be "bought," and there is no need for protests from labor or business for new regulations to aid them. Everyone within the community works for the greater good of society as a whole, not for their own personal gain. Intellectuals, including the planners, managers, and scientists, whose work would traditionally confine them to a mentally challenging

environment, are required to submit one physical labor hour per work day. As Frazier puts it, "We don't specialize [exclusively] in anything. We have time for everything" (84). By this he means that everyone in the community does a bit of everything, and, because all people work, the whole community benefits. Walden Two's philosophy is "brains and brawn are never exclusive"; therefore, all members should contribute their share to the physical demands of the community (163). Frazier even explains that this policy has physical benefits:

> "No one of us is all brains or all brawn, and our lives must be adjusted accordingly. It's fatal to forget the minority element—fatal to treat brawn as if there were no brains, and perhaps more speedily fatal to treat brains as if there were no brawn. One or two hours of physical work each day is a health measure. Men have always lived by their muscles—you can tell that from their physiques. We mustn't let our big muscles atrophy just because we've devised superior ways of using the little ones. We haven't yet evolved a pure Man Thinking. Ask any doctor about the occupational diseases of the unoccupied." (51)

This policy of requiring one hour of physical labor per work day is necessary to prevent the growth of a leisure class. Managers can also assure workers that any workplace problems present have not been forgotten, since they, too, complete an hour of equally physical labor daily under the same working conditions. Walden Two structures the workforce to create an overall feeling of equality so that each community member feels, "I've done my share," no matter how seemingly insignificant the task may be (162).

Walden Two goes one step further in eliminating conflicts between business and labor by reducing the number of businesses within the community. Community members are minimalists; they seek to provide for their basic needs and nothing more. Because they do not consume more than is required to sustain a comfortable lifestyle (which is considered well below the lifestyle of the American average), there is no need for multiple stores offering similar products or services. Imagine the number of stores in local malls that could be eliminated if people only provided for their basic needs. Walden Two executes the minimalist idea, eliminating needless work that does not provide for the greater good of the people or community. There are no overworked, bored, unneeded, or underappreciated employees because all work is done to continually benefit the overall growth and sustainability of the community rather than to benefit particular business owners. When competing operations are eliminated, the power struggle between businesses is erased, and the power struggle between business and labor is eliminated because companies have no need to reduce wages or hours if they are the only carriers of a product or service.

The elimination of businesses is possible primarily because in the fictional community all items are free to community members. Food, clothing, shelter, education, and medical care are all provided without charges or fees. Community members "pay" for their consumption through labor credits rather than money. As Frazier explains, "Labor-credits are a sort of money. But they're not coins or bills—just entries in a ledger. All goods and services are free....Each of us pays for what he uses with twelve hundred labor-credits each year" (45). Even guests who merely visit Walden Two are asked to work two hours during their stay in order to compensate for the lodging and food

they need. Although guests are not required to work, it is suggested that they do so that they can experience how Walden Two sustains itself on the accountability of its members. Money gained through the outward exchange of goods produced in the community is used to fund all services. If a community member desires to attend a university, the community funds the education, considering it capital for future developments.

One dilemma, however, is that Walden Two limits the amount of positions within certain practices (i.e., medical) to what is needed to provide adequately for members and nothing more. A person attending college is told the number of positions that will be available in his or her desired field so that the individual can decide if the investment will be beneficial both to himself as well as the community. All members have the freedom to choose any profession they wish, as long as another member of said profession is needed within the community. If one seeks a job that is unavailable, one must decide on another area in which to work. Although the structure of job availability is similar to today's job market, there is no competition within Walden Two. Students are given the probability of job openings prior to entering college in order to make sensible decisions, and they are offered secondary choices of employment if necessary in an attempt to prevent employee frustrations. Walden Two does not depend on members to work in a field out of necessity but out of desire to contribute their skills and knowledge to that area for societal growth. Members also do not have to compete with one another for a job. Positions are filled based on the availability of the job and the willingness of the people to complete the task; and people are allowed to move to other areas of interest at their

own will. Also, members of the community are not allowed to refuse or refrain from work. This policy helps prevent an imbalanced workforce.

Walden Two requires each community member to contribute four labor credits per day. One of these, as previously mentioned, must involve physical labor. Rather than receiving monetary compensation, workers receive credits that are kept in a ledger. Profits do not help workers, since all necessities are provided at no charge. Monetary rewards are considered unsatisfactory, leading only to greed and the need for over-consumption. Each job is given a credit amount, which is one credit per labor hour on average. Some jobs, such as sewer maintenance and repair, are given more credit (1.5 credits per hour) due to the unfavorable conditions and low demand for the job; however, flower gardening is given a lower credit (0.1 credit per hour) due to the pleasantness and ease of the job. In order to maintain desire for all areas of work, credit hours are adjusted by planners when needed. If supply and demand of the workforce is not equal, credit hours are changed to entice workers to work in fields of low demand for higher compensation or work at tasks they enjoy for lower compensation.

Walden Two is similar to a business structure in its distribution of work. There are only enough positions available as the community needs work done. However, no one in Walden Two is given the opportunity to feel overworked or to sit idle. By decreasing the amount of work required by each member per work day, workers give their best but are not expected to exceed four credit hours per work day (1200 labor credits per year). Frazier explains how Walden Two planners knew before executing the idea that the community would be able to sustain itself on four labor credits per member per day. The work week is not based on eight hours of work per day during a five day

business week; rather, it is based on what was more common in the late 1940s of eight hours a day, seven days a week (a farmer's work week), which yields approximately 3,000 labor hours per year. The planners of Walden Two desired to cut this amount in half, and succeeded in cutting it further.

Skinner uses the main character, Frazier, to explain how the Walden Two four hour work day was established. First, an employee does not produce at the same efficiency throughout his eight hour work day. His first four hours are considered the most productive, and productivity continues to decrease during the remaining four hours of labor; therefore, four hours at Walden Two produces the same amount of labor as five hours in a traditional workforce because Walden Two does not experience a decline in productivity throughout the day.

Secondly, citizens at Walden Two are essentially working for themselves. As Frazier explains,

> "we have the extra motivation that comes when a man is working for himself instead of for a profit-taking boss. That's a true 'incentive wage' and the effect is prodigious. Waste is avoided, workmanship is better, deliberate slowdowns unheard of. Shall we say that four hours for oneself are worth six out of eight for the other fellow?" (53)

Although managers are present to ensure all the work needed to be done is completed, each worker is responsible for completing his or her four labor credits at desired tasks. When a worker is working for himself rather than a profit-seeking boss, productivity increases, deliberate slowdowns are eliminated, waste is avoided, and workmanship is better. Self-employment is considered an incentive wage, allowing

workers the freedom to determine their own job, work pace, and compensation through consumption. Frazier argues that four hours of self-employment is equivalent to six hours working for someone else, adding that often boredom is more exhausting than continuous labor and that loafing does not make a task easier.

As Frazier points out thirdly, not all Americans in a traditional society actually work, whereas everyone works at Walden Two. A traditional society is upheld by eight hours of work by some, instead of four hours of work by all. Due to the self-sufficiency of Walden Two, all people are able to work. There is no leisure class profiting from the labor of others. Since healthcare is provided for all at no charge, no one is pre-aged out of completing their four hours of work. Those who are aging are still able to complete some tasks that aid in maintaining the community. Occupational disability is also not an excuse for members to cease contributing to society because tasks can be found that match all the different kinds of individual strengths people possess. Even children begin working at a young age, moderately and happily, to learn the basics of sustainability. Alcohol is not consumed, eliminating drunkenness, because there are no workplace stresses to escape from, and crimes do not take place because everything one needs is provided for free. Fewer are sick because they have the medical means to take care of themselves, preventing the need for "sick days." Importantly, no unemployment occurs due to poor planning. Frazier concludes that four hours of work from all members of a society are equal to at least seven daily hours of labor by only some.

Frazier's fourth point regards worker efficiencies. He asks the question: When a worker is on the job, is he as efficient as possible? In most cases, he explains, workers become bored, deliberately slow down, take excessive breaks, or perform poorly on the

job, thereby creating inefficiencies. Because Walden Two eliminates unnecessary businesses and empowers members to freely choose their work, no one is idle during their time at work or unsatisfied with their working conditions. There is no need for bars and taverns for alcohol consumption to counteract the unpleasant day's work. Unnecessary positions do not exist; therefore, all workers laboring are contributing to a greater purpose. By eliminating inefficient positions, Walden Two's four hour day is equivalent to an eight hour traditional day. Efficient time management allows people to work productively but also to enjoy themselves. As Frazier remarks,

> "What we ask is that a man's work shall not tax his strength or threaten his happiness. Our energies can then be turned toward art, science, play, the exercise of skills, the satisfaction of curiosities, the conquest of nature, the conquest of man—the conquest of man himself, but never of other men. We have created leisure without slavery, a society which neither sponges nor makes war." (69)

Frazier argues that the industrialization of housework at Walden Two helps create women who are more content, more efficient, and happier. Women are able to complete their housework quickly and be available for other tasks within the community. In the twenty-first century, the notion that industrialized housework added to the efficiencies of Walden Two seems absurd to some readers, because such readers do not think of the home as an industrial work site. However, during the 1940s and 1950s, partly as a result of the "cult of domesticity," a woman's responsibility was to care for the home. Frazier explains that a ten hour traditional work day is equal to Walden Two's four hour day

because of the efficiencies achieved by Walden Two's female homemakers, who (for instance) spend much less time on child care than do mothers in traditional societies.

Skinner uses Frazier's character to explain his view on how efficiencies and cooperation among a group of people can aid in the overall success of a society. Traditional society is often ruled by those with money. By eliminating people's control over monetary funds and erasing the ability for people to acquire excessive possessions, Walden Two equalizes the odds of success across society. No person works more than another. No one is responsible for the success and profits of another. Each person is expected to work only enough to provide for his own consumption. However, in order to prevent business and labor struggles, a revolutionary approach to society, such as that illustrated by Skinner, is necessary.

Part 1, Chapter 4:

Real-world Applications

Skinner designed a community he thought could be successful in modern-day America with the appropriate cooperation and training of participants. The experiment assumes that a limited number of participants will take responsibility as managers, while the remaining members will accept their roles as workers. The experiment also assumes that the four hour work system would extract equal workloads from each participant. However, when people attempted to put Skinner's ideas into actual practice, members often struggled for power and discovered that the work system did not establish enough accountability. Four hours per person was not enough labor to complete the amount of work needed to be done, and all members did not work equally or fairly.

As *Walden Two* became popular in the 1970s, many Americans accepted behaviorist ideas and began seeking to reform American society. They found Skinner's novel inspiring and attempted to recreate the utopia illustrated in his book. However, rather than having a multitude of participants who joined the community to live a simplified life while working as one, most individuals who joined wanted to be managers. They sought to help build the foundation, rules and regulations of the community and then found they were in need of participants willing to follow their guidelines for success. Members' time as actual workers in the societies decreased, creating an imbalance and unsustainable community that caused some to wonder "why behavioral psychology attracts so many 'control freaks'" and not enough laborers (Hinchman). The success of the four hour work day comes from equal participation by people of all ages for a "lifespan," depending on the time of entrance into the community.

When members enter and leave the community in shorter time spans, the work of those members is left undone, transferred to another member, or placed upon a new member. The uncertainty caused by people's lack of longevity in the society creates an unstable work flow. Since Skinner's four-hour day was established on the economic principle of supply and demand (as the need, or demand, for a position increases, the managers create a greater supply of workers by offering higher points per hour worked) the work system can easily become unbalanced when community members disrupt the supply of work while there is still a need.

Despite Skinner's thoughtful outline of a self-sustainable modern America, the majority of the communities formed based on his theories failed. The most successful non-religious community based on Skinner's novel is the Twin Oaks Community in Virginia, founded in 1967. Kathleen Kinkade, one of the founding members of Twin Oaks, documented many of the successes and failures in her novel *A Walden Two Experiment.* The community did not survive without difficulties and found it necessary to redesign the guidelines Skinner illustrated in the novel. Although Twin Oaks outlived many of the other "Walden Two" models, the members of Twin Oaks found that the economic structure was "cumbersome to administer, easily manipulated by slackers, and ill-designed to yield high quality results" (Hinchman). It seemed impossible for managers to determine the proper credit hours to be given per job; therefore, Twin Oaks implemented a new work credit system assigning "one credit for one hour's work, no matter what the job" (Hinchman). Skinner believed that if all people were working towards the greater good of society and had no need for monetary success because all needs are met without payment, each person would put in equal amounts of effort and

expect less praise. Struggles for power, praise, and status would cease. People believed, "naively, that such struggles would become obsolete in income-sharing societies" (Hinchman).

When Twin Oaks began, it was designed more as a commune than the utopia Skinner illustrated. Twin Oaks was a farm full of "concrete" activities, like canning beans, much like modern communes that are still functioning in the twenty-first century (Kinkade 10). Communes tend to emphasize self-sufficiency, hands-on tasks, and providing only necessary provisions for the family, without excess. Much of Skinner's work reflected the practices of communes of the 1940s. Those practices, however, failed to work in later decades.

One of the disadvantages to communal living is the unpredictable life cycles and life styles of individuals. Some desire to live in a self-sufficient environment; others are hiding from family or the law; while those who feel they will be able to contribute little while still gaining complete benefits enter the commune to take advantage of the work system. As Kinkade commented at the time, "there are just a lot of people in our commune who don't want to do any work" (Kinkade 17). This attitude created tension and negativity that was not depicted in Skinner's *Walden Two*.

Many communes, however, do find success through common beliefs and values. "There are established groups that are very comfortable…[and] have a deeply religious base" that allows them to work better as a whole when they share a similar vision (Kinkade 21). Skinner's theory falls between religious and communal, creating a dilemma in which people who join have expectations that eventually are unmet, leading them to depart and thus triggering a cyclic expectation from those remaining that people

will repeatedly depart because of conflicts in basic beliefs. This depletion of members is problematic because without enough members, achieving Skinner's proposed four-hour work day is impossible. In most real communes that have actually been established, there is more work necessary for mere survival than there are people willing and able to fulfill the needs. The hours of work are recorded more like a cash flow budget than a simple "self-employed" log such as in Walden Two (Kinkade 43). Skinner suggested that each member could work four hours at any task, and as all members worked in varying areas daily, the amount of time needed per task would work itself out throughout the workdays. However, Twin Oaks discovered that work had to be assigned based on what skills were available due to the high turnover rate. In the few communes that have actually been successful, people care about their tasks, jobs, and skills, thus successfully illustrating Skinner's idea that if people are involved in determining the nature of their work, the conditions of their work, and the time it takes to do their work, they will be more productive and willing to work without monetary compensation: according to Kinkade, there is no truth "in the classic assertion that there is no incentive to work without personal financial gain....The reinforcement comes from the finished product" (49). According to Skinner, when equality is established, each member is aware that his or her contribution is important and necessary for survival despite the lesser mental or physical requirements that other tasks may require.

Walden Two was used as a template for Twin Oaks; however, the founders soon learned that when varying personalities, needs, and behavioral dependencies are intermixed, changes to the template were necessary. They came to believe that "simple and modest tastes and desires" are required when one chooses to leave traditional society

(in which there are multiple retail chains each offering 10 feet of aisle space for soap choices) and enter a world of simplicity where food, clothing, and shelter are the most important concerns. Competent members at Twin Oaks preferred a selection policy to aid in eliminating those members who would not invest in the community or give their share of labor (Kinkade 105).

An idea Skinner did not emphasize, but one that Kinkade points out was a weak point for Twin Oaks, involved start-up funding and continual financial support while living within the commune. In the novel, Walden Two members sell excess goods and services to the outside community for funds; however, the funds necessary to establish the community are not directly discussed. Kinkade found that at Twin Oaks it was nearly impossible for the community members to work only within the commune. It was necessary for survival that at least a few members brought in wages from the city or obtained some other kind of outside funding (e.g., the publishing of Kinkade's book). At first members volunteered for outside work, but soon the community found that a work rotation was mandatory to prevent the same workers from going into the city and to ensure income for basic needs such as food (Kinkade 75). The fewer people there are within a community, the less food is able to be harvested. Skinner describes an abundance of food so that no person goes without; however, the reality is that communes only have as much food as they have people able to maintain the crops and funds to buy goods too expensive to produce in-house. Food appetites must be adjusted to what is available, and the members of Twin Oaks "had to learn to eat the vegetables [they] produced" (83). Food was not as abundant as Skinner describes in *Walden Two*, and

Twin Oaks found that processed foods must be bought where there was no ability to produce them within the commune.

Another problem experienced at Twin Oaks was that many who entered the commune were not familiar with making sacrifices and were unwilling to continue giving up modern luxuries to remain in the community. At times, living in Twin Oaks was more like living in a third world country than living in the utopia Skinner imagined. Times were hard because of the limited provisions of basic food, clothing, and housing. Endless hours were invested to cultivate, harvest, and store enough food for members to survive. In contrast, an abundance of food is produced by Walden Two members' four hour work days. Living quarters at Twin Oaks were cold, exposed, insect-infested barns instead of the insulated, furnished rooms described in Skinner's novel. Kinkade and others at Twin Oaks experienced the reality of Skinner's theory—a theory which failed to illustrate the harsh struggles involved in establishing the community. The buildings in Walden Two are described as being much more lavish than the buildings members of Twin Oaks found available. Visitors at Walden Two were accommodated in comfortable rooms with shelves, cupboards, and bookcases next to bunk beds and sitting chairs; conversely, Twin Oaks residents adjusted to living in barns on straw bedding (Sinner 13, Kinkade 92).

Skinner also does not address how members became talented enough to maintain, build, and fix the facilities. Did Walden Two have skilled carpenters? Twin Oaks most certainly did not. *Walden Two* depicts an established community, where people with a variety of skills joined together in unison to build a new society. Kinkade emphasized the inherent difficulties during the initial founding phase of creating a self-sufficient community. The experience at Twin Oaks suggests that the efficiency of an established

community is much greater than that of a new development. Each community—the imagined community in Skinner's novel and the real community of Twin Oaks—sought to adjust its needed production hours to ensure stable, continuous operations and member satisfaction. However, Twin Oaks found need for many more alterations to its production schedule to provide basic member needs, at least during its embryonic stage. This suggests that as a commune grows, its efficiency is likely to increase, but no commune is ever likely to be as efficient as the one described in *Walden Two*.

Part 2, Chapter 1:

Human Efforts and Goals

The efficiency theories demonstrated in Skinner's utopia have been difficult to execute in modern society due to individual behavior conflicts, supply and demand inconsistencies, and central control disputes. However, many of his basic concepts were similar to Frederick Taylor's principles of scientific management, such as time studies. Skinner emphasized that too many hours of work created monotony and lowered an employee's production level because of boredom and a lack of stimulation. Similarly, Taylor studied employees' time efficiencies and found that employees wasted efforts throughout their day. The employee worked more strenuously during the early hours of the day, then tired quickly, and decreased overall efficiency in the later hours of production because of inefficient motions that caused an excess of energy output for a minimal production output.

Skinner, to solve this problem, suggested that decreasing the length of the work day would increase workers' production, happiness, and satisfaction. In fact, as Frazier puts it, "Happiness is our first goal" (194). However, Taylor sought to change the manner of work during the day to decrease lost production hours, increase daily output, and maintain workers' daily schedules. Taylor argued that if an employee uses fewer motions per task output, thereby increasing production, his efficiencies should be rewarded. He argued that such monetary compensation was justified by the increase of expected labor. Taylor believed he could perfect each worker's day in several ways. One way was by providing needed breaks to reduce mental and physical strains. Another way was by locating needed materials closer to workers. A third way was to provide

nearby containers to hold a worker's output. The increases in productivity caused by these changes would justify an increase in employees' wages. Moreover, worker inefficiency would decrease, and each work day would result in consistent output by all workers. Employers accepted Taylor's studies because those studies sought to show how to increase employers' capital gains and improve their bottom lines. (In fact, some critics of Taylor have argued that his ideas were deliberately diabolical in disadvantaging workers [see, for instance, Braverman 77-83].)

Employees, meanwhile, hoped for compensation equal to the new required output. Often, however, they were forced to accept the new production schedule with little to no increase in wages. Some even lost their wages entirely because fewer workers were now needed to achieve the same level of production. Taylor's studies in fact often caused deceit among employees and employers. As employers redesigned the flow of production to increase profit, they withheld higher wages from workers. Therefore, workers manipulated their production to require lower minimum outputs. Skinner and Taylor understood the impact employee happiness had on production output; however, both failed to understand the mental transformations that all participants must undergo for successful, complete implementation of their plans. Skinner tried to benefit the overall well-being of the worker through self-employment strategies. Taylor's principles sought to help the industrial community as a whole—worker and capitalist. Without management changes, Taylor's principles ultimately helped only the capitalist and left the employee with higher productivity expectations and also with lower pay and scare tactics (such as threats of job loss) remaining.

Skinner's theory eliminates monotony by focusing on each person's daily task, which is self-controlled, changes as desired, and has limited production time requirements. Each person is allowed to focus on his skills and adjust his workload as desired. Taylor took a different approach, focusing on one businesses' production line, narrowing down a specific task to a per-movement breakdown, eliminating wasted motion, and eliminating skill requirements. Business owners deliberately stripped workers of their skills and dictated their pace of work with high quotas and demands of the clock. Skilled laborers were no longer needed, thus allowing capitalists to better exploit their unskilled and dependent labor force by forcing upon them a grueling pace of monotonous and repetitive labor for menial wages.

Taylor's theory created the most worker efficiency for the greater benefit of the employer, focusing on mindless, repetitive tasks and eliminating employees' control over the knowledge of production and their work. In contrast to Skinner's approach, Taylor's single-task production methods added unnecessary monotony that caused skilled workers to feel resentment and that increased potentials for injury as workers became mentally disengaged on the job. Both methods of management – Skinner's and Taylor's – exist in modern business today and often succeed, depending on the task, employer, and employees involved. Skinner and Taylor voiced the need for greater efficiency in the modern workforce. Skinner reduced work hours to encourage employees to work enthusiastically while productively, and Taylor reduced the difficulty of the tasks and number of employees needed to execute production.

In the introduction to his book *Principles of Scientific Management*, Taylor recalls President Theodore Roosevelt's 1908 statement concerning "national efficiency" (iii).

Roosevelt called out to an inefficient nation, urging it to reassess its daily consumption of energy, daily waste of human efforts and energy, and daily waste of time. The intangible wasted efforts were less concerning because

> We can see and feel the waste of material things. Awkward, inefficient, or ill-directed movements of men, however, leave nothing visible or tangible behind them. Their appreciation calls for an act of memory, an effort of the imagination. And for this reason, even though our daily loss from this source is greater than from our waste of material things, the one has stirred us deeply, while the other has moved us but little. (iii)

Such inefficiencies result in wasted products, time, and energy. The effects of strikes could also lead to much waste, and Taylor sought to determine the best means of work that would result in higher profits for the business and higher wages for its employees. Through timed studies, Taylor was able to determine the following:

First, workmen had accepted the "fallacy" that higher productivity equaled more men out of work. Taylor dealt with this fear by arguing that as a greater supply of goods was produced using the time study results, the theory suggested that price per output would decrease, resulting in more individuals being able to purchase the output and thereby creating a greater demand. The higher the demand for the item would result in a need for more employees, increasing employment opportunities rather than decreasing them (Taylor 4).

Second, "defective systems of management" affected employees' ability to produce. If management does not understand the needs of the task required, they are unable to properly manage. A lack of managerial skills results in distrust and disrespect

from employees, who begin working for their own best interests rather those of the company, causing deceit and lower productivity (Taylor 6).

Third, "inefficient rule of thumb methods" caused multiple levels of employees to complete tasks incorrectly. Rather than relying on employees learning through observation, Taylor saw that regulated, purposeful, perfected training lessons should be held to explain the best method to complete one's work. Men should also be hired based on their ability to be trained and complete the task, not merely their availability (Taylor 9).

Taylor believed that each employer could eliminate these kinds of problems, defects, and inefficiencies by realigning workforce strategies to comply with *The Principles of Scientific Management.*

In the early 1900s as Taylor was beginning to compile his studies, the Socialist Party seemed to pose a "serious political threat" to business leaders (Nicholson 130). Socialists sought to give workers power by promoting numerous strikes led by groups such as the International Workers of the World and the United Mine Workers. These groups sought to transfer power to those who once had none. During this time, the Supreme Court passed various rulings that both "protected and contained labor" (Nicholson 131). The Court was filled with ex-corporate lawyers who were happy to pass rulings favorable to their former clients. The Great Depression left many unemployed for years after it hit. Businessmen who were still in operation took advantage of a high supply of workers and low demand of employees. Employers drastically cut wages to save overhead at a time when employees were struggling to survive. In response, employers took advantage of the glut of workers to increase workloads and replace

skilled labor with those willing to work for impoverishing wages, such as immigrants. These business practices were similar to those advocated in Taylor's studies in the sense that they stripped skills away from workers, thereby making them dependent on others for their wages. Unskilled workers referred to this dependency as "wage slavery." Yet Taylor sought to employ trainable workers who were physically able to uphold the high demands made by employers.

Still, many people, even outside of organized labor, had serious misgivings about Taylorism and its consequences. The "[s]tubbornness of businessmen," according to Senator Henry Cabot Lodge, actually "[bred] socialism at a rate which it is hard to contemplate" (147). Socialism was never more influential and powerful a force in the life of the United States than in the early 1900's. Millions of workers were mentally and physically exhausted by long hours of hard labor, inadequate compensation, and spirit-crushing hopelessness. During the massive strikes of the late nineteenth century, employers were not solely affected. "[P]rogressive critics and efficiency experts" called attention to the "long-term and short economic waste that such struggles produced" (164). This struggle between capital and labor roused many to begin theorizing ways to correct the problem. While "businessmen and government maintained all of their historic willingness and determination to use force and the power of law against labor" (writes Nicholson), they began to use more passive means to mollify workers, including scientific management and worker representation (164). Taylor's principles sought to respond to employers' desires to lower the number of employees per task and to decrease overhead while still being considerate of the physical and financial well-being of the employees. Rather than disregarding the laborers' needs, Taylor pursued their full

inclusion in any reform processes and full disclosure of any plans to the workforce. He hoped that such openness would reduce hostilities between capital and labor and contribute to the complete and successful implementation of his principles.

As Taylor sought to streamline production to create higher compensation through higher output, employees feared job loss, and employers feared upheavals. Workers in the post-Depression Era, according to Jesse Brogan, "minimized what they accomplished to assure the employment of their friends and neighbors" (42). Employees understood that higher per capita production resulted in fewer employees needed and more men without jobs. Skilled craftsmen were forced to accept employment at deflating rates to support their families. As a result, management gained complete control over laborers as "the labor process" was "rendered independent of craft, tradition, and the worker's knowledge" (Braverman 78). Employees were expected to adapt to the new production requirements. If they would not or could not do so, they were expelled from their positions and replaced with individuals who were trainable in simple-task production and taught how to maximize their daily output with more efficient tools, more efficient movements, and more logical placement within the workplace. Unfortunately for those already in the workplace before scientific management practices were installed, "an abrupt psychological wrench was required" (83). Suddenly they had to adapt to significantly new ways of thinking and working. If they did not or could not adapt, they would be fired.

Part 2, Chapter 2:

Implementation

Taylor's principles emphasize the need for proper tools—both men and equipment—and proper training for all involved, from upper management to tool handler. This is because if a man is using incorrect tools to shovel iron, he will be inefficient. If his company invests in the proper equipment for him to use, his production can increase, and, therefore, profits will also increase, and the increased profits can cover the cost of new equipment. If a man is not trained to do his task efficiently, Taylor believed the man will create a method that makes the work as pleasing as possible without paying consideration to pace and production output. However, when a man is properly trained in the most efficient manner to complete his work, his pace increases, and his energy output decreases, allowing production to rise.

Taylor's method for promoting efficiency takes the "problem" away from the worker and places half of the responsibility of effective execution on management (Taylor 17). In one especially important passage, for instance, Taylor writes that

> Under scientific management the "initiative" of the workmen (that is, their hard work, their good-will, and their ingenuity) is obtained with absolute uniformity and to a greater extent than is possible under the old system; and in addition to this improvement on the part of the men, the managers assume new burdens, new duties, and responsibilities never dreamed of in the past. The managers assume, for instance, the burden of gathering together all of the traditional knowledge which in the past has been possessed by the workmen and then of classifying, tabulating, and

> reducing this knowledge to rules, laws, and formulæ which are immensely helpful to the workmen in doing their daily work. In addition to developing a science in this way, the management take on three other types of duties which involve new and heavy burdens for themselves. These new duties are grouped under four heads:
>
> First. They develop a science for each element of a man's work, which replaces the old rule-of- thumb method.
>
> Second. They scientifically select and then train, teach, and develop the workman, whereas in the past he chose his own work and trained himself as best he could.
>
> Third. They heartily cooperate with the men so as to insure all of the work being done in accordance with the principles of the science which has been developed.
>
> Fourth. There is an almost equal division of the work and the responsibility between the management and the workmen. (15)

By creating a system that develops a plan, trains workers in how to implement that plan, and creates a division of labor, Taylor felt he was creating an ideal workplace situation in which laborers are trained and compensated for maximum production that also maximizes employers' profits.

Taylor describes how Bethlehem Steel, through use of proper management, improved techniques, training of workers, and improved use of tools, was able to increase daily output from 12.5 tons of steel loaded to a car per day to 47.5 tons. Directives from management took the power of decision-making away from the laborer and left the

responsibility— for good or for bad—in the hands of management and supervisors. Taylor believed that when training of workers, understanding of the work process, and cooperation between management and labor begin at the top of a company and filter down, workers are more willing to adjust to a new plan if it involves an "all-in" approach in which everyone is committed to accomplishing the same goals. Taylor therefore incorporated rest and increased wages to benefit workers and thus win their full commitment. Compensation for the increased work was minimal, however. It amounted to a change from $1.15 to $1.88 per day for an increase in production from 12.5 to 47.5 tons. Taylor's methods promoted management's interests, as fewer hours, days, and employees were needed to complete an equal amount of work at lower wages per ton shoveled. In his report, Taylor summarizes the results of implementing his plan by saying that the "average cost of handling a ton of 2240 lbs" decreased from $0.072 to $0.033. This change allowed for a decrease in the number of employees from as many as 600 down to 140, and it only involved increasing daily wages from $1.15 to $1.88. The difficulty in fully executing Taylor's plan involved the matter of wages and also the matter of providing employees the incentive to maintain a higher production level even though they knew their positions could be cut if they did not meet the "trainable" criteria and produce a "fair day's work." Taylor defined a "fair day's work" as "all the work a worker can do without injury to his health at a pace that can be sustained throughout a working lifetime" (Braverman 67, 72).

Just as steel shoveling requires specific motions which could be changed to fit Taylor's scientific management principles, the same was true of many other unskilled and skilled tasks. Taylor, like Skinner, discusses the need to remove needless motions and to

replace them with fewer, simpler, and swifter motions. To make steel production more efficient, for example, it was necessary to ensure that the worker, materials, and cart were within a reasonable distance of one another to remove extra steps in the loading process.

However, Jill R. Hough's article titled "Using Stories to Create Change" suggests that Taylor's work was not credible. In fact, Hough called Taylor's work a "pig-tale" that provided "accounts of the experiment that did not match evidence from other sources" and "was not morally acceptable" (586). Hough thus impugned not only Taylor's scholarly veracity but also his fundamental ethics. But despite such criticism, "Taylorism dominates the world of production...since its fundamental teachings have become the bedrock of all work design" (Braverman 60). Almost every worker in almost every industry is familiar with the desire of modern companies and other institutions to be as efficient as possible.

Ironically, if details contained in Taylor's account are in fact false, then he did as Skinner did, creating a fictitious account in which new-age theories are successfully implemented. However, his theories were implemented by capitalists to benefit themselves, not workers. Perhaps the motives of both theorists were to stir change within readers in the hope that they would execute real-life replicas of their theories. Both Taylor and Skinner, for instance, urged the use of ingenuity to create tools and other objects that would make tasks less manual. Such tools might include, for example, heavier shovels to scoop more steel, or they might include clear dining trays to decrease washmen's motions (Taylor 32, Skinner 41). According to one important writer about management, Peter F. Drucker, at the core of this kind of scientific management "is the organized study of work, the analysis of work into its simplest elements, and the

systematic improvement of the worker's performance" (Braverman 61). Both Taylor and Skinner believed that without systematically breaking down a process second by second or step by step, one cannot correctly analyze where time and efforts are being wasted and cannot then eliminate such waste to improve the process and consequently improve the output. Skinner and Taylor illustrated the importance of timed studies to best analyze correctable flaws in the process of production.

Although Taylor thought it best if employees embraced his methods, his theories actually required limited consent from workers because his methods could be imposed by employers. As long as employees were under the control of the employer, there would be little risk of an employer's interests being overpowered by the interests of employees. Capitalists put a powerful minority of employees in control of the production process. Implementations of Taylor's theory were able to be tested repeatedly. Such testing could be done easily on a small scale, because fewer participants were needed. And Taylor's methods could be implemented gradually: only one business or trade was required to be invested at a time in implementing the methods. Nevertheless, workers often resisted Taylorism because they saw the threat it posed to their lives and livelihoods.

Skinner's fictional theory, in contrast, required a complete change in the thinking, behavior, and values of an entire society. Therefore, his theory could not be easily tested or applied in modern society. Control in Walden Two was equally distributed to all people involved. Because many participants would be needed to replicate Skinner's utopia, including multiple trades and businesses, his large-scale efficiency model is not easily replicated in modern society. Skinner's theory thus differs in this way from

Taylor's, but even Skinner's theory was sometimes resisted in actual communes when attempts were made to implement his ideas.

Both writers saw a need for change that would benefit workers. Both believed that fewer hours or less strenuous physical labor and ample compensation would result in highly satisfied, reliable, committed workers. Skinner was philosophically driven in his research, thinking, and development. He was an idealist. Taylor was far more practical and far more tied to the real world. His ideas were rooted in scientifically timed theories and hypothesizes tested and analyzed in real time. Skinner was a utopian; Taylor was an actual consultant to big business.

Taylor, in fact, defended his theory by claiming that it was *not* utopian. Indeed, he asserted that his theory was actually a compilation of practical, commonly accepted ideas that had never before been brought together as part of a coherent, consistent system:

> It will doubtless be claimed that in all that has been said no new fact has been brought to light that was not known to someone in the past. Very likely this is true. Scientific management does not necessarily involve any great invention, nor the discovery of new or startling facts. It does, however, involve a certain combination of elements which have not existed in the past, namely, old knowledge so collected, analyzed, grouped, and classified into laws and rules that it constitutes a science; accompanied by a complete change in the mental attitude of the working men as well as of those on the side of the management, toward each other, and toward their respective duties and responsibilities. Also, a new division of the duties between the two sides and intimate, friendly

> cooperation to an extent that is impossible under the philosophy of the old management. And even all of this in many cases could not exist without the help of mechanisms which have been gradually developed.
>
> It is no single element, but rather this whole combination, that constitutes scientific management, which may be summarized as:
>
> Science, not rule of thumb.
>
> Harmony, not discord.
>
> Cooperation, not individualism.
>
> Maximum output, in place of restricted output.
>
> The development of each man to his greatest efficiency and prosperity. (74)

Skinner was obviously presenting his case for an *ideal* society that did not yet exist and that might never exist exactly as he imagined it. In his introduction, Skinner addresses America's need for "not a new political leader or a new kind of government but further knowledge about human behavior and new ways of applying that knowledge to the design of cultural practices," a process that would take much time and cooperation (xvi).

Taylor, in contrast, was presenting his case for ideas that could be implemented immediately and that would produce immediate benefits:

> The general adoption of scientific management would readily in the future double the productivity of the average man engaged in industrial work....Think of the increase, both in the necessities and luxuries of life, which becomes available for the whole country, of the possibility of shortening the hours of labor when this is desirable, and of the increased

opportunities for education, culture, and recreation which this implies. (75)

Part 2, Chapter 3:

Methods of Management

For years, managers have sought ways to extract the highest productivity from workers during a work day in order to gain profits. Corporations spend time and money training employees in lean management methods so they can determine worker inefficiencies, thereby decreasing waste and lowering production costs. By eliminating one second of movement, an employee may be able to complete his task ten more times within an hour. Such seemingly small efficiencies quickly add up. Taylor emphasized how the proper tools and work structure could highly influence a worker's efficiency and how efficiency could affect the employer's bottom line. Most big businesses and governments seek to maximize productivity within a 40 hour work week, usually divided into 8 to 12 hour shifts, while still keeping production costs and turnover low and employee compensation (including both pay and benefits) marginal. For decades, workers and businesses have been fighting over the proper compensation for the amount of work required. When employees demand more pay, employers expect more work.

As is well known, the financial gap between business owners and labor is ever-increasing, and workers have often protested against the pay gap and the push for increased productivity. When workers agitate society enough, legislative bodies often pass regulations to aid them in their struggle against exploitative corporations. However, once businesses tire of pacifying the working class, they buy politicians, and regulations are changed to aid big businesses. There is thus a constant tug-of-war – perhaps even class warfare – between business owners and workers.

Both Taylor and Skinner believed that with each wasted motion, an employee increases the production time per piece of output. If the overall task accomplishment requires longer work hours, a company must allocate more money to produce each item. Such costs result in less pay per worker and a higher cost per product. These higher costs are then passed on to employees in their roles as consumers. An inefficiency of even one second per piece produced can add an exponential amount of worker hours to production. Both Taylor and Skinner therefore believed that efficiency is key to all production, whether in agriculture, industry, management, home maintenance, or any other field. In fact, they believed that efficiency could be beneficial in all aspects of life, both professional and personal. Taylor's goal was "to describe, predict, and control behavior" in organized settings, and this aspiration "is still a goal of organizational behavior" (Fry 3).

Both Taylor and Skinner argue that by controlling a worker's behavior, a manager can better determine production levels, calculate expected profits, and provide for a worker's basic needs. When management determines a precise method for completing a task, the worker's production rate can be calculated. Calculations of output allow management to better predict the amount of manpower needed for any task and the expected profit per unit of output. However, as each production line is fragmented, a limited amount of skilled labor is needed, and workers may be troubled by monotony and feelings of lower self-worth. The value of skilled craftsmen in the workforce declines. Unskilled laborers, however, must be mentally and physically trained to perform a task accurately and productively. There results an imbalance of laborers who can be influenced to work increasingly hard for lowering wages.

Taylor presumed that employees would be rewarded with higher wages for any increases in their physical output, although this increase in wages often did not occur. Higher wages, he believed, would provide employees with financial stability, which would in turn help to reduce stress and increase happiness. Skinner tried to avoid a tedious, uniform communism by allowing workers freedom to choose their tasks and decrease the time they had to allot to production. Less time spent monotonously producing unnecessary goods (he assumed) would provide workers more time for pleasure.

In the environments studied by Taylor, people with jobs feel pressured by management because they feel that they have less and less control over their rates of production and over the speed with which they must complete their tasks if they hope to ensure job security. Taylor contemplates a system in which each man works independently rather than as part of a team. Skinner, in contrast, emphasized a community working together to create additional time for leisure and educational studies while decreasing daily physical strains. Each theorist, therefore, saw the value of time, but each saw that value from a different perspective.

Epilogue

The foregoing study has attempted to answer various questions, but inevitably it has also raised some others that may be the subject of future study. Did the individualism of Taylorism make it more prone to success, at least in the way it was embraced by many business owners? Did the communal nature of Skinner's approach make implementing his "efficiency" ideas more problematic? Capitalists seem to have found it relatively easy to impose Taylorism on workers. Perhaps this was why Taylorism gained more traction than Skinner's communal approach. Is Taylorism a more dictatorial approach and Skinnerism a more democratic way of thinking? These kinds of questions may be well worth exploring in future scholarship on these two theorists and their theories.

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