

An early implementation of TQM in a Byzantine Hospital. Should we hope that we could revert to our starting point?

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Abstract

Total Quality Management is an approach to the managerial science that first and successfully was adopted by Japanese industries in the 1950's. Western industries especially in the U.S. started to become more interested in TQM since the early 1980's. This interest is growing continuously until today. Total Quality is a holistic philosophy of a company rather than a technique, that goes across all over the organization, and that aims to provide the organization's customers with products and services that satisfy their specific needs.

In October 1136, the Emperor John II Komnenos (1118-43) built the monastery of Christ tou Pantokratoros "The Ruler of All" on a hill in the north central part of Constantinople. There was also a famous hospital attached to the foundation. The operation rules of this hospital are precisely described in the typicon which is the charter of the monastery. There have been a lot of corporations during the life of the Byzantine Empire, dedicated in the care of the poor mostly civilians such as hospitals, homes for the aged and lepers' sanatoriums. Reading this charter we get surprised from the sensitivity and the care the Emperor demonstrates, which aim to provide qualitative healthcare to his sick brothers.

This paper examines the case that in this hospital we have an early implementation of Total Quality Management as it has been defined by its modern theorists. If so, there is perhaps an indication that the application of TQM in Greek hospitals today could become much easier, in the same manner as the Japanese classic perspective of life, made easier and more successful the implementation of TQM in the Japanese industries.

Keywords: TQM, quality, healthcare, hospital, Byzantium

1. Introduction

There is a paradox in the history of Total Quality Management. This is the fact that although TQM, developed in the mid 1940s by an American, Dr. W. Edward Deming, was first adopted and applied by Japanese managers in their industries.

Dr. Deming, an advisor in sampling at the Bureau of Census and later a professor of statistics at the New York University Graduate School of Business Administration, participated in a team of 200 scientists that was introduced by General MacArthur, after World War II, having as its target to rebuild Japan. Dr. Deming was invited by the Japanese Union of Scientists and Engineers to deliver some lectures on his techniques about statistical quality. Many of the CEOs in Japanese industries had the chance to attend these lectures. Eventually, many Japanese manufacturing companies adopted Dr. Deming's theories and became able to produce quality products at reduced costs. For his contribution, Dr.

Deming was awarded a Japan's Second Order Medal of the Sacred Treasure from Emperor Hirohito In addition, the Japanese Union of Scientists and Engineers (JUSE) established in 1951, the Deming Prize.

In the 1970s and 1980s, in American market became evident a threat coming from Japan. While the American companies gave emphasis in the production of large quantities of products, Japanese companies were concentrating on producing quality products. As a result the inexpensive, high quality Japanese products, gained a substantial share of American market. In the meantime, the interest about quality in the United States was growing. All the more scientists and professionals recognized the importance of quality as a crucial factor in the fight to regain the lost share of the market and some of the more important American industries, including Xerox, IBM, and Ford, began adopting Dr Deming's principles of Total Quality Management. But it was not until late 1980s and early 1990s that there was a global realization of the strategic importance of quality.

In recent years this importance became obvious in the public sector too and TQM has been adopted by some public organizations.

Three Americans are reputed to be the major theoreticians in the progress of the philosophy of Total Quality Management. They are W. Edwards Deming, Ph.D., Philip B. Crosby, and Joseph M. Juran, Ph.D. Their philosophy and theories about quality, constitute the base for the development of TQM. And despite their many differences, there are also a lot of similarities among them.

Some eight hundred years ago, in Constantinople, the capital of Byzantine Empire, a hospital was established as a branch of a monastery. The Byzantine Empire for most of Byzantinologists started with the establishment of Constantinople as the new capital of the Roman Empire by the Emperor Constantine the Great (330 A.D.) The end of the Empire came with the collapse of Constantinople in 1453 in the hands of the Turks. In the life-span of the Empire that lasted for more than a thousand years a remarkable civilization developed the predominant element of which was a deep religiosity. This is very clear in all the expressions of social life, in legislation and of course in art. The detailed regulation of the hospital's operation, as a part of the charter of the Pantokratoros Monastery, is annexed the appendix of this paper. Reading it for the first time, one could sense a breath of quality in the regulations for the whole organization, in its least detail. I got it as a challenge to try to find out which points of the operating rules for this hospital, converge with the rules of TQM. Of course, it would be a chimera if we searched to find in the hospital of 1136, administrative methods that comprise statistical analyses or other modern managerial tools. Such a comparison, would be unfair both for the civilization of this period, and for our mentality. This is why the initial theories of the three afore-mentioned leaders in the quality movement were selected for the comparison. If the inquiring question would have a positive answer, then a second question rises. Which were the critical factors that led in such a daring, for the age, innovation? Where the reasons economic or it was something different that came from a perspective in life and respect for humans? If so, a third and more theoretical question comes up; has any of the elements of this perspective of life survived into this day? Is there any possibility to follow a research in the reverse direction? Perhaps the key factor for the success is to lay emphasis on human beings, and then all the rest will come as a result.

2. Key Concepts of TQM

Deming believes that the establishment of a new, long-term perspective about quality by the top management is a keystone to the whole process. Quality must become the central focus in the organization. The mission and the vision of the organization must be clearly defined. This will help employees to know exactly their daily tasks. Employees are a capital for the organization, and educating and training them must be considered as an investment. Prevention is better than correction. The process must be continuously improved, so that mistakes are avoided. Deming also believes that management must emphasize systematic understanding of variation and reduction of variations in order to improve processes. Continuous quality improvement, called the Deming Chain Reaction, can achieve the enhancement of productivity. Deming identified fourteen points leading to quality which he believed held the secret to quality (Walton 1986; Deming 1986).

Philip Crosby presented his philosophy of quality in two books: *Quality Is Free* (1979) and *Quality Without Tears: The Art of Hassle-Free Management* (1984). Crosby also developed a 14 step process to assert quality. According to Crosby "Quality is conformance to clearly stated requirements" Requirements must be identified, and consequently the organization has to produce products or services that conform to the requirements. Crosby also maintains that prevention is better than correction. This requires a systematic understanding of the weaknesses of the process followed by improvement. And again the key concept of the quality process is the commitment of top management. Another important factor is the employees' awareness of quality problems. Crosby introduces the term "Zero Defects" as the goal of quality.

Juran's definition of quality is fitness for use. He believes that "quality does not happen by accident". And if quality is not a fortuitous event, to achieve it first we must plan for it. That is, identify customers and their needs - both internal and external - and work to meet those needs converting them to product specifications. Second, we have to examine if the reality fulfills our plans. This presupposes the creation of measures of quality, and the establishment of optimal quality goals. Third, the quality must continuously be improved through creation of processes capable of meeting quality goals in "real" operating conditions. These three are the Juran's quality trilogy (Juran 1986):

Quality planning - Quality control - Quality improvement

A comparison among the quality theories of these three quality leaders shows that although there are differences among the philosophies, many of the concepts are common to all three. (Sahney, Dutkewych, and Schramm 1989; Sprigener and Angelo 2001).

The common points in the three guru theories are (Gerald Suarez 1992):

- They consider the role of management as a keystone in the establishment of an organizational culture that focuses in quality and involves the commitment from the top of the organization. More than about 85% of the problems related to quality can be attributed to management policy or action. In order to achieve improvements management action is required.
- The commitment to quality must be reflected in a clear to all mission of the organization that will provide all the employees with a guide for their daily tasks. The scope of all management actions is to fulfill this mission.
- The pursuit of quality is not a program with starting and ending points. It is rather a long term process the results of which

will be visible in the long term period not only in terms of reduced costs, but also in the ability of the organization in anticipating and preventing problems.

- Continuous training at all levels of the organization; cooperation and effective communication throughout the organization are critical factors in the development of quality.
- Although inspection is necessary in some processes mainly for security reasons, must be eliminated as a means to achieve quality. Current inspection methods are not effective in this.
- Cost does not increase proportionally to quality. There is no competition between them.

Also the three approaches involve measurements and problem solving techniques but the degree of the emphasis in their usage varies significantly. This is one of the differences among them. Other differences involve goal setting, supplier relationships and leadership activities. The differences mainly focus in technical details in order to apply the main principles described above (Gerald Suarez 1992).

The above theories have applied to various organizations more or less successfully. They go beyond the economic concerns and create a philosophical framework that can also be applied in health care organizations. Moreover in the case of health care organizations we can say that the quality perspective must be endogenous. The Henry Ford Health System (HFHS) is one of these healthcare organizations which adopted and implemented the quality management process. The key concepts that have guided the implementation of the Quality Management Process at Henry Ford Health System are the following (Sahney and Warden 1991):

1. Top Management Leadership
2. Creating Corporate Framework for Quality
3. Transformation of Corporate Culture
4. Customer Focus
5. Process Focus
6. Collaborative Approach to Process Improvement
7. Employee Education and Training
8. Learning by Practice and Teaching
9. Benchmarking
10. Quality Measurement and Statistical Reports at Every Level
11. Recognition and Reward
12. Management Integration

The implementation of TQM, and the development of these key points, has been based primarily upon the predescribed theories and the utilization of the experience of hospitals that had already forerun it. To ask and answer whether the goals of HFHS have been achieved perhaps conflicts to the principles of quality theory.

In Greece, the progress in this sector is disappointing. The only nuggets of quality one can find in a public hospital come mostly from few initiatives of individual employees.

3. The case of the hospital of *Pantokratoros* Monastery

There have been a lot of corporations during the life of the Byzantine Empire, dedicated in the care of mostly poor civilians such as hospitals, homes for the aged and lepers' sanatoriums. The most widely known Vasileias, was a multifunctional foundation, that was created and financed by the Bishop of Caesarea Vasileios (330-380) and included all the above. But as far as the hospital of the *Pantokratoros* Monastery is

concerned, it is the first time we have a written evidence about the format and the operating rules of such an institution and especially from the hand of its founder. Today the common practice in Greek legislation is the edition of a brief decree-law, which usually relates that the details of the application of the decree-law will be described in posterior ministerial decisions. On the contrary, in the case of the hospital of the Pantokratoros Monastery all the details and even its annual budget have been prescribed in its charter, written by the Emperor and obviously based on the advice of specialized consultants. The hospital was founded in 1136 as an appendage to the Monastery of Pantokratoros in Constantinople. It was a public, non profit organization and its total capacity was 61 beds. There were 5 wards of 11 beds each (the one allocated for emergency cases) and 6 more special beds with mattresses pierced through the middle for those the condition of whom required such distinctiveness. One teacher who taught medical skill, thirteen doctors, the one female, sixteen certified assistants (four of them female), ten auxiliary assistants (two of them female), and ten orderlies (two of them female) served in the hospital. The hospital would also be sure to have the services of a hernia surgeon (perhaps as an external doctor). For the external patients there were four extra doctors of whom two were physicians and two surgeons, accompanied by four certified assistants and four other auxiliary ones. Besides the doctors described above, there were also an infirmarian and a superintendent and two accountants.¹ The staff of the hospital also included one chief pharmacist, three certified druggists, and two auxiliaries, one doorkeeper, five laundry-women, one man to heat water, two cooks, one groom to work with the horses at the mill and the horses of the doctors, a gatekeeper, another to act as a caterer, two priests for the churches, two readers, two bakers, four undertakers, one more priest for funerals, one cleaner of drains, and one miller. In addition to these there was a sharpener to clean up the medical instruments and a coppersmith. The doctors were divided in two teams and each team served in the hospital every second month.

We must say that in the charter there is no reference to the top management - as we know it today - of the hospital. The more competence that infirmarian and the two primikerioi have, is that of a higher administrative clerk who exerts oversight rather than manager tasks. This also justifies the difference in their salaries which are higher than those of the others (paragraph 52) although the difference was small. The roles of all members of the staff are well distinguished but there is not any indication that anyone of them separately or as a team has the role and the tasks of the top management (CEO or board of directors as we mean them today) We can validly suppose that the role of top management was kept by the Emperor for himself, or for his trusty representatives. Besides, the location of the hospital justifies such a hypothesis as it was in the capital of the Empire, near the Great Palace.

¹ *The phrase in the original text is "two optiones". In the English text taken from Byzantine Monastic Foundation Documents: A Complete Translation of the Surviving Founders' Typika and Testaments edited by John Thomas and Angela Constantinides Hero, with the assistance of Giles Constable, the word optiones is translated as attendants. But in the "Thesaurus of the Greek Literature" of the department of Missiology at the School of Theology of the University of Athens, Fr K. Kyriakidis translates the word optiones as accountants. I prefer this translation.*

Moreover the charter itself with its details indicates an active participation of the Emperor in the management of the foundation

without leaving any margin for different initiatives. This charter makes very clear the mission and the vision of the organization. The commitment to quality from the top of the organization is obvious in every paragraph. It is a clear guide for all the staff in its daily tasks. No one could have the excuse that he did not know what to do and how to do it. Also a long term orientation to quality is clear. Here, undoubtedly the role of management in the establishment of an organizational culture that focuses in quality is very clear. In the whole text it is evident that the major interest of the founder was to provide qualitative services to the sick citizens, not only from a clear medical perspective but also as a part of hotel services. There are numerous detailed instructions from the unsewing the mattresses and pillows and pull apart the wool, to be comfort, to the daily diet of the patients; it also provides for female doctors and nurses to serve the female patients so that they feel comfortable. Even the spiritual needs of the patients have been provided with the position of two priests. Furthermore, the efforts to contain bureaucracy are very clear. In paragraph 41 that is about the infirmarian and the superintendent is quoted that "these men will pay no heed to the expense of these things in maintaining an unfailing supply of everything". Nowhere are related ending points in the effort to supplement the best services to patients. The continuous effort for the best is implicit. The commitment to quality is not just rhetoric but a constructional element of the hospital. The exhortation to the hospital staff (42 paragraph) about the way they ought to view their service in the hospital, as if it was offered strictly to God, and the reference to the unsleeping eye of God, who watches this service was enough to keep them on a continuous alert about their tasks. We have no references in the charter about continuous training at all levels of the organization. Nevertheless there was a teaching department in the hospital. It was in a way a teaching hospital. We can assume that there was a continuous education at least of the medical staff. Also the only clear sample in the text that exhorts the cooperation and communication throughout the organization is in the point where the process of the admission to the hospital is described. But the administrative structure of the organization that was not centralized indicates and presupposes a high level of cooperation in order to fulfill the mission as it is described in the charter. The inspection of the whole process, referred to in paragraph 40, has preventive role rather than corrective. Furthermore the nature of the organization requires inspection for security reasons. It is remarkable that the inspection is not based on a sample but on the whole population. This was accomplishable because of the small number of patients. Moreover nowhere in the chart seems to be any reference to minimization of the cost of the operation of the hospital. It is clear from the salaries of the staff (paragraph 52), from the allotments for the sick and for the service personnel (paragraph 45), the allotments of supplies for the infirmarian and the superintendent (paragraphs 49 and 50) and the allocation of other sums (paragraph 53), that the focus was not on elimination of cost but only on quality. Nowhere in the text seems to have the sense that there is a competition between cost and quality. One reason for this is the fact that the hospital was an imperial foundation and this had to reflect in all its operation. But the detailed description of the salaries and the allotments indicates that there was also a concern about the cost of hospital's operation. There is nothing left to be guided by fortuitousness, since even an imperial foundation had limited resources.

Still, a lot of non practitioners express their objection about how TQM will integrate with existing quality systems in healthcare since the healthcare quality is implicit in the medical profession (Brent James 1991). There is the sense that TQM's principles, especially in healthcare are often lists of philosophical rules like an evangelical indoctrination rather than a scientific methodology. Their objections have as a starting point the fact that healthcare organizations are completely different from manufacturing companies where the application of rational measurement techniques that generate new knowledge is accomplishable. These objections are maybe more valid in the case of the Byzantine hospital we exam, since the scientific methods for measurement and control were absent at this period. The answer in these objections is that the charter mainly focuses not in the medical but in the support services, that is the "hotel functions" of a hospital. These services have a very important contribution to the overall quality of healthcare within a hospital and they are the greatest opportunities to increase patient satisfaction. Support services also can borrow the most from Industrial Quality Control (Brent James 1991). Also, the fact that there was an ongoing quality measurement system, monitoring on a daily basis the quality of these services, and that was for all the patients indicates that there was a usage of the available for the period methods of measurement and control. It is important that this daily measurement of quality had been put out to primikerioi who were doctors and that this was their only task. This is an indication how important was the monitoring process to safeguard quality. It is clear that TQM implementation has two parameters: a cultural, based on management philosophy and a practical consisting of measurement and analysis tools, based on the scientific methodology. We can say that in the hospital of Pantokratoros Monastery the first parameter is obvious and the second parameter has been met to a great degree for the datum of that age.

4. The critical factors that led in this result

Which were the factors that led in the establishment of a hospital with such specifications in 1136? In the text of the charter we can find the prompt note of the emperor to all the hospital staff that serving our sick brothers is the same as serving God. This is a direct reference to the Gospel (cf. Matt. 25:40) and constitutes the basis for the philanthropic activity of the Church and the Byzantine Empire. There was the strong religious persuasion during the whole life of the Empire that it was the earthly copy of the Kingdom of Heaven and the Emperor was also the earthly copy of God. He had held the title of Pontifex Maximus (God's High Priest) from the last Emperors of the ancient Roman Empire. And as God ruled in Heaven, his representative should rule on earth and carry out his commandments and look after the people. This theocratic constitution remained unchanged during the eleven centuries the Empire lasted (Runciman 1977).

In the West, the Church was often called upon to exert itself as the local civil authority. This historical situation directly involved the Church in politics and worldly matters, and the Western Church, partly out of necessity and partly out of choice, chose to assert itself in this arena. The theocratic concept of Constantine continued to prevail in the East, and reached its pinnacle in Justinian's reign in the seventh century. His politico-religious view was "symphony," a symbiotic relationship in which the Church and state were not connected by law or power, but by the Christian faith. The emperor and the empire

were bound by declaration of faith to maintain the faith in its entirety. Early Christian writers, such as Eusebius of Caesarea (4th century), started to cultivate this idea, with its roots in the Hellenistic concept of kingship, and the emphasis on the mimesis of God (theomimetic). Demetrios Constantelos in his classic study about Byzantine Philanthropy and Social Welfare explains the way in which the concept and the practice of philanthropia differs in Byzantium from that of the classical Greek antiquity. The difference lies at the different center of the meaning. In ancient Greece "philanthropia was mostly anthropocentric" while in Christianity philanthropia "became eminently theocentric". Its basis "was the love of God rather than the love of man." (Demetrios Constantelos 1991) This fundamental difference had important consequences. To quote Constantelos again:

"As the evidence indicates, one can clearly discern that in the early Christian societies of both the East and the West, philanthropia had assumed an integrated and far-reaching meaning. The term was used to describe man's love for the totality of humanity. Its application was directed to even the humblest among men. Philanthropia appropriated the meaning of selfless love and willing sacrifice. It was extended to the underprivileged, as it proclaimed freedom, equality, and brotherhood, transcending sex, race, and national boundaries. Thus, conclusively, philanthropia was not limited to equals, allies, and relatives, nor to citizens and civilized men, as was most often the case in ancient Greece." The hospital of Pantokratoros monastery was not the only proof of this indissoluble bond between the secular power and the evangelical kerygma. There were a lot of hospitals and other philanthropic institutions during the life of the empire. The legislation of that period is also a proof of this theocentric perspective of philanthropia. We can find a plethora of laws meant for the protection of the human rights especially those of the most poor and feeble. There are laws that protect the women and the maternity, a tight rein in town planning in order to protect the citizens from the arbitrariness of the rich, measures to protect poor peasant farmers from the rich landowners and so on (John Erickson 2005).

I believe that this framework is a sufficient explanation of the factors that led to this qualitative result in the case of the hospital of our interest. The philosophical and religious framework is extremely important in the implementation of TQM since we recognize in it such a holistic philosophy and a system of values rather than a managerial technique. And this is the reason that explains also the successful implementation of TQM in Japanese industries rather than in American ones. Japanese philosophy, society and organizational structures have generally encouraged its industries to operate cohesively rather than take the market-capitalist approach of ubiquitous price-oriented competition., (Hutton 1991) The roots of such an approach lie back to the system of values of the Japanese society such as *kaizen* that means continuous change for the better, which many readers will recognize as continuous improvement. The philosophy of *kaizen* is straightforward. It requires that everyone in the organization be involved in the improvement process - executives, management, supervisors, and workers. This process has been immortalized in Deming's plan-do-check-act cycle of continuous improvement, which is the backbone of many quality systems in use today.

5. Should we hope?

This is not a simple question to be answered with a yes or no. The structure of the modern Greek society is fundamentally different from this of the Byzantine Empire. Although the beliefs and the practice of that age were maintained until the establishment of the new Greek State, that changed dramatically during the reconstruction that took effect under the reign of Otto who was the first King of this emergent State. Otto and his Bavarian regents established a new scheme in the relationship between church and state according to the Lutheran model of their country. The violent ablation of the Greek Church from its traditional body of the Great Church of Constantinople had a lot of consequences, of whom the main was its conversion into to a state-run Church, without any dynamic trend. Everything that was reminding the past rated as anachronistic and the word Byzantium became synonymous to the word obscurantist. We rediscovered the Byzantium only in the late sixties, when we realized that other developed countries were looking upon it with admiration. This is the one (frustrating) view. There are however some encouraging signs mainly based on the private initiative. The roots we described before seems to be very deep in the conscience of the nation to be easily lifted. Our strongest hope is the rediscovering of our tradition not as an arid anamnesis of our past, but as a channel for innovation and refreshment.

6. Conclusion

We found that there are a lot of hints showing that in the hospital of the Pantokratoros Monastery we have an early implementation of TQM at least in its first parameter, that of the managerial philosophy. It was the structure and the principles of the Byzantine Empire that led in such an implementation and there are a lot of similarities between that fact and the successful adoption and implementation of TQM by Japanese industries. It is a desire that nations should turn to profit from their traditions and cultural substrata in order to gain from the experience and the practice of their ancestors. In modern Greek society there seems to be a lack of such a spirit. It is disappointing that in the country where the most marvelous accomplishments of the human thought were established and most of them were applied in practice creating an admirable social life, there is such a discard of these principles; unless we re-import them from abroad. Perhaps if we rediscover our past then we should hope about our future.

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