Abstract

Purpose – The purpose of this paper is to present the framework of a fourth paradigm since the existing three paradigms in quality management are not sufficient anymore to understand what happened in the past and surely fail to understand what is happening at the moment and needed in future.

Design/methodology/approach – A literature review has been undertaken on different visions on quality management that are used. The underlying principles have led to three quality paradigms. Literature on quadrant models is studied to place the three existing paradigms and identify the possible characteristics of the fourth.

Findings – One can discern four quality paradigms in quality management: the Empirical Paradigm, the Reference Paradigm, the Reflective Paradigm and the Emergence Paradigm. The use of these paradigms differs according to the context. Together they form a concept of Total Quality Management. At the moment the Emergence Paradigm has not had enough attention although it might be the best equipped to find new ways of working for the organisations in the current context.

Research limitations/implications – In the literature review the authors selected seven journals in the Business Source Premier database: Total Quality Management (Total Quality Management & Business Excellence); the Academy of Management Review; Product and Operations Management; Organisational Dynamics; the Harvard Business Review; the Sloan Management Review and Organisational Behavior and Performance. In the advanced search mode the authors entered two subjects: ”quality management” and “paradigm”. The selected results (in total 289 articles) were examined for its fitness for answering the questions above. That resulted in a selection of 26 articles that are being used in the literature review.

Practical implications – The Emergence Paradigm can be further investigated on its use for quality management in organisations in times of emergent change. Some first insights have been presented here.

Social implications – The Emergence Paradigm can have impact beyond the field of quality management.

Originality/value – The paper provides new insights in the essence of quality management in times of change and clarity on the usability of the thoughts and tools of four different paradigms in the twenty-first century.

Keywords Total Quality Management, Context, Emergent change, Definition of quality, Quality paradigm, Vision on quality

Paper type Viewpoint

1. Introduction

Quality Management has developed enormously since its origin. Some date this origin in the times of the Egyptian pharaohs[1]. However, most of the time it is said that modern quality management started with scientific management, flourishing in the late nineteenth and early twentieth century. In 1946, the American Society for Quality Control (the later American Society for Quality (ASQ)) was founded, that has been at the forefront of the quality movement. In 1956, five western European Countries (France, Italy, Western Germany, The Netherlands and the UK) established a similar European Organisation for Quality (EOQ) (at that time called European Organization for Quality Control). In the 1950s, ISO standards also have been developed. In the next decade, quality models were designed like the Malcolm Baldrige Award Model and the EFQM Excellence Model. An intended merger between EFQM and EOQ failed. In healthcare and higher education the systems of peer review and accreditation were introduced.
To explain what happened scientists like Hardjono (1995), Jouslin de Noray (2004), Shiba and Walden (2006) and Vinkenburg (2006) provided arguments that the difference between ISO, EFQM and the situation in healthcare can be understood as a difference in mindset, some say a difference in paradigm. van Kemenade (2010, 2014a, b) made a comparison of the mindsets that have been proposed at the time. We now name them the Empirical Paradigm, the Reflective Paradigm and the Reference Paradigm.

Each paradigm has its own vision on the definition of quality. In the past a lot has been said about quality. Famous quality experts like Juran et al. (1974), Crosby (1979), Feigenbaum (1986) and Deming (1986) all had their part in the discussion. Also in articles by people like Garvin (1984), Harvey and Green (1993), Reeves and Bednar (1994) and Conti (2006) the concept of quality has been discussed thoroughly. And of course many quality experts referred in their search for quality to Robert Pirsig (1974) and his books *Zen and the Art of Motorcycle Maintenance* or the later (Pirsig, 1991) *Lila*. Most of the time it is stated that there is not one definition of quality. Quality is a fuzzy, vague concept. Quality lies in the eyes of the beholder. The best you can do is keep talking and discussing about it. Quality changes over time and needs to be (re)defined in a context. Since the definition of quality is dependent on the circumstances (Harvey and Green, 1993; Reeves and Bednar, 1994; van Kemenade et al., 2008) quality management also seems to need different methods, tools and ways of thinking.

The rise and fall of scientific management, the development of quality models, the failure of the merger between EFQM and the EOQ, the different visions on quality can be explained with three quality paradigms. However, some events cannot be understood and explained with these concepts. How was it possible that quality management in Japan after the Second World War was so successful, although the same Deming and Juran had been active in the USA without such successes? How can we explain the current development in, e.g., healthcare, where tools and methods from all paradigms are used?

A discussion in the Dutch Academy for quality led to new insights. Amongst others Vinkenburg (2007, 2010, 2009, 2013), van Kemenade and Hardjono (2011) and van Schijndel and van Kemenade (2011) contributed to this discussion. The conclusion is that a fourth paradigm is needed. In this paper, we present our journey in search of this fourth paradigm based on deduction from a range of quadrant models from Wilber (2000) and Hardjono (1995); the Sqeme© model (van Velzen et al., 2002); and Cynefin (Snowden, 1999). We found the Emergence Paradigm. Here we present the framework of that paradigm. We think we found a way to clarify, why sometimes the discussions on quality that we need to have do not lead to consensus or even not to mutual understanding. Prospective the new paradigm can help organisations to cope with a fast-changing complex environment in modern times. In the last paragraph, we show how the Emergence Paradigm can be applied in practice.

A bycatch of our research is that we found out that Deming as well as Pirsig have been largely misunderstood. And why Lean and Six Sigma should not be mentioned in one breath. In the following paragraphs, we will first look at literature about the development of quality management and the different paradigms that have been used in quality management theory and practices. That leads to the description of three quality paradigms. In the current era of constant and rapid change a new fourth paradigm is needed. In search for the fourth paradigm we propose and describe the Emergence Paradigm[2] that in our opinion received not enough attention so far.

2. Looking at the development of quality management

2.1 Models, periods and stages

There is little agreement on the existence of quality paradigms, let alone on which paradigms then should be defined. Many scientists avoid using the word paradigm (in the sense of Kuhn, 1962). Spencer (1994) and Chaffee (1985) mentioned three
models of strategy”. They both referred to the distinction between the mechanistic, the organismic and socio-cultural model. Guillen (1994) discerned three “managerial models”: scientific management, human relations and structural analysis. He called TQM an eclectic model based on all these influences.

Hermel (1997) described four great “periods” from the beginning of the century to the 1980s in quality management:

1. beginning of the twentieth century: inspection;
2. 1930s to 1950s: quality control;
3. 1950s to 1970s: quality assurance; and

Each of these periods, he says, is characterised by a specific approach, concepts, methods and specific references. Also the object of quality management differs. During inspection the object was “defects detection”; during quality control “master control of final product quality”; during quality assurance “permanent construction of intermediate and final quality”; and during total quality “global management of quality in actions and products”. The sense of the period goes from reaction, over regulation, to prevention and pro-action. This is close in line with Garvin (1984) who called the last period strategic quality management.

Dahlgaard (1999) did see a change in the concept of quality. In the early phase the concept of quality was related to products, and the degree of conformance to specialised standards was the main consideration. Gradually, Juran’s term “fitness for use” became more important, and later on quality meant “meeting requirements of the customers”. “Meeting requirements” was changed to “satisfying the customers” and now “satisfying the customers” has changed to “delighting the customers”. In this changing process the objects of the quality concept have also changed from products of tangible character to almost everything supplied to the customer both tangibles and intangibles.

Martensen and Dahlgaard (1999) hold a plea for a “new approach” in quality management. They found that eight criterion parts are relevant when developing excellent innovative strategies and plans in creative and learning organisations. These can be combined in an extended double loop Plan–Do–Study–Act Cycle. The first loop representing the strategy loop, and the second the culture loop. Terziovski et al. (1999) suggested three “practical approaches” that organisations use to implement quality management: the standards-based approach, the prize-criteria approach and the elemental approach (that consists of the many ideas promoted by consultants and experts in the area).

Whittington (2000) combined several theories about strategy from the past five decades and categorised them into four perspectives on strategy: the classic, the processual, the evolutionary and the systemic perspective.

Drucker (2000) saw a “shift” in the last centuries from the manual labour to the machine-driven economy and now towards the knowledge-based society and economy. People are now the most important asset in a company. That is in line with the ideas of Conti (2006),
who stated that human and social relations are the most critical aspect for organisational excellence. Williams et al. (2006) put forward the argument that there are two “kinds of quality management” – “old” or classical quality management and “new” quality management. The classical quality management is based on preventing defects, reducing waste, improving operating efficiencies, reducing variation, etc., and utilises a range of improvement approaches, systems, tools and techniques. It has its roots in the quality management thinking of the 1980s, enhanced by more recent developments such as Six Sigma, total productive maintenance, lean thinking, etc. The “new” quality management is not concerned so much to gradually reduce routine variation within the organisation as to ensure effectiveness in responding to crises as and when they occur.

Holmlund (2007) presented four “scopes” on quality management: production, service, relationship and network. In the relationship scope, quality would reside in interactions and processes shared between companies rather than in internal processes, products, or encounters with customers. Closely related to considering individual relations to be of significance is to consider a collective of inter-linked companies, i.e. a network, as the arena where an individual company’s competitive advantage and quality are formed. Interesting furthermore is the idea of the eclecticism (Rossman and Wilson, 1991; Guillen, 1994; Allan, 1998): quality management using different tools and methods at the same time.

The literature review above brings us many different thoughts and ideas about models, periods and stages in quality management. In this research the specific definition and verification of the timelines like used by Hamel (2007) and Dahlgaard (1999) had no priority. The literature review was aimed at finding characteristics of different paradigms in quality management.

2.2 Paradigms
Some scientists actually use the word paradigm (Kuhn, 1962). Allan (1998) described four “research paradigms” to undertake research into quality management: positivism, interpretivism, action research and eclecticism. Eclecticism means for him that in quality management no one paradigm can tap all the parameters of the research questions, which might be posed. She cited Rossman and Wilson (1991), a renowned research on quality management “shamelessly eclectic”. Yeung et al. (2006) concluded their research that Total Quality Management itself is not a new paradigm. “The hypothesis that TQM is not merely a reflection of quality management practices but of distinctive cultures and paradigms that lead to a unique performance is not supported” (Yeung et al., 2006, p. 166).

However, most research works from the 1990s till now agree that we definitely have to do with a paradigm-shift, when TQM was implemented (Grant et al., 1994; Dalrymple and Drew, 2000; Singh and Smith, 2006). This is supported by other quality experts (Jouslin de Noray, 2004; Hardjono, 1999, 2005; Shiba and Walden, 2006). In the words of Hardjono (1999): “One can draw a sharp dividing line through the world of quality management between the precise and the pliable”. He considered the EOQ and the ASQ to be part of the “precise” and Total Quality Management including EFQM part of the “the pliable”. The two cannot easily be combined. The failure of the merger between EOQ and EFQM was caused by the fact both belonged to a different paradigm.

Many of the articles studied state that there is a paradigm-shift from “hard” to “soft” concepts and skills in quality management (Waddell and Mallen, 2001; Bruch and Ghoshal, 2003; Rahman, 2004; Maguad, 2006; Lai et al., 2009). This is supported, e.g., by Conti et al. (2003) and Oakland (2005).

Waddell and Mallen (2001) saw the evolution of quality management from its highly rational and purely statistical origins to its more recent focus on “soft” concepts such as employee empowerment and involvement. They mentioned the emergence of a new quality paradigm, purporting that quality shall be a value shared amongst everyone in the
organisation: quality, a way of life. Later, Bruch and Ghoshal (2003) stated that for 50 years management theory and practice have adopted a technical, analytical approach in which the role of the so-called soft factors like emotions and feelings has largely been denied. Now the role that emotions play in shaping corporate behaviour is acknowledged. They discerned four organisational energies (the comfort zone, the resignation zone, the aggression zone and the passion zone) that can either stimulate or handicap competitiveness.

Also Maguad (2006) predicted “a move towards greater integration between the analytically based systems and statistical engineering approach to quality and the psychologically based human relations approach” (referring to Conti et al., 2003, p. 238).

Lai et al. (2009) stated that it is important to draw on an integrated perspective of institutional theory and the resource-based view of the firm to explain quality improvement. Their study reveals that quality improvement is mediated by core competence, such as self-reinforcing human capital based on a cognitive trust-based hereditary institution. “To successfully establish an effective institution, we suggest that merely focussing on a regulative or normative institutional system is not enough or appropriate. A firm needs to centre on a cognitive institutional system to create an organisational climate of trust” (p. 1120).

In our review we found three visions that go deeper into the topic: Beck and Cowan and their Spiral Dynamics value systems, Jouslin de Noray and his revolutions and Vinkenburg’s schools.

**Beck and Cowan and their value systems.** Beck and Cowan (2000) divided the way people think in “value systems” or “memes”. Originally they described more value systems, but we limit our description here to the centre five:

1. Truth Force, focussing on authority, morals, rules and tradition;
2. Strive Drive, focussing on success, growth, consumerism and opportunities;
3. human bond, focussing on community, authenticity, sharing and caring;
4. Flex Flow, focussing on systems, self-organising, networking; and
5. Whole View, focussing on holism, cosmos, spirituality.

van Kemenade (2014a), largely based on Beck and Cowan, predicted a future of quality in which the context is the most crucial element. Also Laloux (2014) applied Spiral Dynamics on organisations. He held a plea for wholeness, listening to purpose and self-management. Future leadership does not say where to go, but listens to where the organisation wants to go. No command and control, but sense and respond (cf. Cynefin in the next chapter).

**Jouslin de Noray and his revolutions.** In May and September 2004, Jouslin de Noray presented a paper, respectively, in Copenhagen and Moscow under the title “Theory and techniques on breakthrough change[3]”. According to Jouslin de Noray the quality movement, as we know it after the Second World War, brought extensive progress to organisations. He saw four revolutions in quality management:

1. control;
2. continuous improvement;
3. breakthrough; and
4. reaching the essential.

These quite well match with Beck and Cowan’s Truth Force, Strive Drive, Flex Flow and Whole View. Table I provides some more characteristics of each revolution according to Jouslin de Noray (2004).

Jouslin de Noray saw that the ideas differ so much that he mentioned his revolutions paradigm shifts.
Shiba and Walden (2006, p. 36) had a similar layout. They summarised and compared the characteristics of the types of management using Figure 1.

From there they specifically elaborated on the breakthrough paradigm.

Vinkenburg and his schools. Vinkenburg (2006, 2007, 2009, 2013) stated that the reality can be divided in three domains Natur, Menschlich Innerlich and Kultur (Nature, Human Interior and Culture). Quality management is not enough focussed on the interior, the not-measurable, the subjective and the not-controllable. Originally, based on three domains from Wilber (2000), the “I”, “we” and “it”, which will be elaborated on later, he discerned three schools. In 2007, he used the terms statistic, managerial and reflexive school. Objects from the “it” domain are manageable by control, while the “I” domain and “We” domain can be influenced through commitment. In later publications, he distanced himself from Wilber. He still mentioned three schools and re-named these into: the Empirical School, the Normative School and the Reflective School (see Table II).

Vinkenburg (2013) did not want to search for a fourth school. In his argumentation, he asked for the problems such a school would handle, the symptoms it fights against, its diagnosis and its therapy and treatments. He preferred school above paradigm, since his schools do not fulfil the requirement of Kuhn’s (1962) definition of a paradigm.

3. Three quality paradigms
The literature review so far inspired us to the description of three quality paradigms each with their characteristics and their gurus. We describe the definition of quality, the adage, the focus, the aim, the problem and solution it tackles and tools it uses, the organisational

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<th>Control</th>
<th>Continuous improvement</th>
<th>Breakthrough</th>
<th>Reaching the essential</th>
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<tbody>
<tr>
<td>Logic</td>
<td>Proundness of winning a challenge</td>
<td>Listening</td>
<td>Trust in unknown</td>
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<tr>
<td>Contract</td>
<td>Success</td>
<td>Discovery</td>
<td>Lost control</td>
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<td>Guarantee</td>
<td>Teamwork</td>
<td>Dream</td>
<td>Unconceivable targets</td>
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<tr>
<td>Be conform</td>
<td>Satisfaction of work done</td>
<td>Openness</td>
<td>Peacefulness in community with other</td>
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<td>Protection</td>
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<td>Do the way you feel and listen to what happens</td>
<td>Do because you trust and feel in peace</td>
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<tr>
<td>Threat</td>
<td>Do be sure and check the success</td>
<td>Enthusiasm of reaching a dream</td>
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<td>No initiative</td>
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Table I.
The four revolutions in quality management based on Jouslin de Noray (2004)

Figure 1.
Three paradigms according to Shiba and Walden
tasks, the sciences that are dominant, the leadership needed and the risks of the paradigm. The paradigms are paced in the perspectives of Whittington (2000) and the logics of Friedson (2001). Each paradigm is described in a metaphor.

3.1 The Empirical Paradigm: quality is conformance to requirements

During the 1920s of the last century the systematic approach of quality management starts to surface. In the beginning the main characteristic of this quality paradigm is the focus on the end product. When mass production became common, it became too costly to inspect every single product. With the help of Statistical Process Control, sampling became available as a way of quality inspection. The ASQ and the EOQ originated in that period and are dominated by what we call the Empirical Paradigm. The Empirical Paradigm derives its name from its methodology. Knowledge about the reality is gained by experiencing here and now, by sensory perception. It is evidence based. The quality knowledge concerns observable characteristics (aspects) of entities (objects), like products, services and processes. The Empirical Paradigm works on actual and specific problems. These are technical and can be solved by science. It is about objective knowledge. Knowledge is gathered (inductive) by measurements and its objective results are expressed in quantities like sizes and numbers. The Empirical Paradigm focusses on rules. Quality is conformance to requirements (Crosby, 1979).

The Empirical Paradigm registers and controls. Its motto is: “to measure is to know”. Vinkenburg (2006) stated that it starts from process variation (symptom), sees the unpredictability of product characteristics and the uncontrollability of production processes as its problem (diagnosis) and seeks the solution in reduction of the variation (therapy) by determining the causes of the variation and take these away. This happens (treatment) by statistical analysis of process variables (SPC, seven tools, Six Sigma). According to Whittington’s strategic perspective we are talking about the classic perspective (Whittington, 2000). Statistics and other “hard” sciences are in favour. Joint Commission International Accreditation fits in this paradigm as well as protocolisation and evidence-based medicine.

In Hardjono’s (1995) Four-Phase Model©, the whole complex of absorbing, digesting and exuding energy in organisations is expressed through four competencies: material, commercial, socialisation and intellectual. Competencies which organisations need to survive, competencies they draw on from their environment and which they exude towards their direct stakeholders (owners, financiers, members, personnel, business partners such as customers and suppliers and the various treasuries). Accumulation of these competencies means growth which is experienced as being successful and which contributes to the survival chance in the long run; competencies which each of these stakeholders, as their own
entities, needs for survival and growth. The Empirical Paradigm is mainly interested in the material competence. The ability to increase, maintain and optimally utilises the resources (financial means, technology and material means).

Leadership is directive and technical. A metaphor for this way of thinking is the army. Friedson (2001) discussed three ways of organising; in his terminology this paradigm fits with the “manager in control”. We recognise the Empirical Paradigm in Quality Control Systems. The risk of the empirical paradigm is bureaucracy.

3.2 The Reference Paradigm: quality is fitness for use

However, not everything can be easily measured in metres, kilograms, seconds or amperes. Or, if you do, you do not catch the essence of what the entity is. Beauty, love, wisdom, trust are examples of this; and that goes for an organisation as well. To solve this dilemma quality models were designed, frameworks of reference in which criteria or areas to address are mentioned. We call it the Reference Paradigm. This paradigm does not take the reality (this is how it is) as starting point but convictions about how the reality should or needs to be (this is how it should). This paradigm prescribes what norms need to be met to get an award. Instead of rules, it provides guidelines and models. The Reference Paradigm values, certifies and accredits using models like the ISO9000-series, Joint Commission International Accreditation in Healthcare, the Balanced Score Card, the EFQM Excellence Model or the National Malcolm Baldridge Quality Award. National Awards were installed all over the world to motivate companies to keep improving, since improvement is its aim.

The quality knowledge is gathered (deductive) searching for observable, real cases that prove that the organisation meets the norms. Theoretically quality can be defined as fitness for purpose or fitness for use (Juran, 1951).

Vinkenburg (2006) stated that what we call the Reference Paradigm sees suboptimalisation as problem (diagnosis) and seeks the solution (therapy) in a total approach of all processes, all stakeholders in a cyclic way of working (PDCA). Management sciences are in favour. In terms of Whittington (2000), we are talking about the evolutionary perspective. Famous guru of that movement was Deming, who developed in the 1950s the PDCA cycle, based on the ideas of Shewhart. Another representative of this movement was Imai and his Kaizen approach.

In Hardjono’s Four-Phase Model©, the Reference Paradigm is mainly interested in the commercial competence, that is the ability to have access to markets and the ability to act on them. In terms of Friedson (2001), the “customer is in control”. A metaphor for this way of thinking is a robot. Leadership in the Reference Paradigm is supportive, coaching leadership. The risk of this paradigm is “pampering”.

When, in the 1990s of last century attempts were made to merger the empirical EOQ with the referential EFQM that was doomed to fail: they come from different planets.

3.3 The Reflective Paradigm: quality is subjective

Vinkenburg (2006) introduced what we call the Reflective Paradigm. The Reflective Paradigm starts from the existence of different realities, like perceptions (this is what I see and that is what you see) and interpretations (this is what you think and that is what I think). Everyone has his own reality that can be different tomorrow from today. This paradigm looks for the difference, makes it explicit and reflects on it. Knowledge is gathered (inductive) by telling and listening to stories, by conversations, group meetings and inner conversations. This paradigm reflects and philosophises: What did I do well and what did I do wrong and why? The Reflective Paradigm considers people, their interactions and conceptions as its entity and more specific their worldview and their capability to reflect on that. It is mainly about non-observable aspects, subjective. Based on Zen and the Art of Motor Maintenance, the work of Pirsig (1974) is often quoted as proof that quality cannot be defined, but just discussed. The adage is that “Quality is not a thing, it is an event” The science in favour is philosophy.
In terms of Whittington (2000), we are talking about the processual perspective. A metaphor for this paradigm is the statue of Rodin called “Le penseur”.

Vinkenburg (2006) stated that what we call the Reflective Paradigm sees “wrong attitudes” (psychical aspect) and “unfruitful interactions” (the social aspect) as symptoms, “insufficient self-criticism” as problem (diagnosis) and seeks the solution in “detaching mechanisms” (therapy). This is done (treatment) by shadowing, modelling, second opinion, intervision, time out, stories (tell and listen) and discussion (Vinkenburg, 2006). We recognise the Reference Paradigm in an instrument like peer review as it is used in Healthcare using visitations. Friedson (2001) talked about the third logic: “the professional in control”. In terms of Hardjono’s Four-Phase Model©, the Reflective Paradigm is interested in the socialisation competence. Leadership is delegating, since the professional knows best what to do. The risk of this paradigm is arrogance.

4. In search for a fourth paradigm
Still many questions cannot be solved within (one of) these three paradigms. Miller and Cangemi (1993) reported that many Total Quality Management efforts fail. They mentioned the following reasons: managers do not delegate quality to involve everyone in the organisation; appropriate consultants to implement the system are not evaluated properly; lack of employee involvement; failure of management leadership with too much emphasis on cost cutting and profits, not customer service; poor communication with workforce; and resistance to change. Asif et al. (2009) saw quality management fail and stated that: “Institutionalisation of quality management programmes requires a context specific design that promotes greater buy-in by employees; developing the routines and structures that act as memory of organisational knowledge, and nurturing a common and fostering culture (instead of various sub-cultures)”.

Mosadeghrad (2014) concluded in his literature review on the failure of quality management that quality management does deliver better performance when an appropriate model of TQM is appropriately implemented in a supportive environment. van Kemenade (2015) experienced in his daily work that what works in the western world does not work in countries like Oman, Nigeria or Ghana.

Crosby (1992) opened his book Completeness: Quality for the 21st century with a question: “What do we do after Total Quality Management?” He described the system of quality management specification (MIL-Q-9858) with pages of requirements for a quality assurance system. It did not work. He continued that the Baldrige Award criteria (and ISO 9000) turn back the clock 30 years. In the words of our paradigms this means that the Empirical Paradigm and the Reference Paradigm are according to Crosby inadequate for the coming decades. Crosby sought the solution in completeness. He discerned three principles of completeness (Crosby, 1992, p. 19): you have to cause employees to be successful, cause suppliers to be successful and cause customers to be successful. To implement completeness one should treat the whole as one. One should build a culture of consideration, make everything understood and be complete but not finished. “The successful managers will be those who can establish and implement the proper vision, obtaining the best performance of people in the process”. So far, one could argue, Crosby promoted principles and ideas that have already been practiced in TQM. Maybe that is why he talked about reformation, not revolution (Crosby, 1992, p. XIX). That is where we start to disagree. Crosby promoted a new management and called them Centurions, the Roman officers who led the legions to conquer the world. This manager is going to have to be like an orchestra conductor, whose worklife will be a symphony (Crosby, 1992, pp. 14, 15). These metaphors do not characterise the flexible, servant, agile leader we think the twenty-first century needs. The most interesting idea in the book is the “culture of consideration”. Crosby compared the American Republic with twenty-first century completeness. Whereas the American Republic (and the Empirical Paradigm and the Reference Paradigm too) considers conformance to
requirements – described in depth – important, the new management system provides requirements that are understood by all and policies that are made with consent of the governed.

Drucker (1998) mentioned in seven chapters seven underlying management assumptions that are out of date for the twenty-first century:

1. That there is just one right way to organise a business;
2. That the principles of management apply only to business organisations;
3. That there is a single right way to manage people;
4. That technologies, markets and end-users are fixed and rarely overlap;
5. That management’s scope is legally defined as applying to an organisation’s assets and employees;
6. That management’s job is to “run the business” rather than to concentrate on what is happening outside the business; and
7. That national boundaries define the ecology of enterprise and management.

Drucker argued that every one of these assumptions is now either wrong, out of date or both. “Failing to abandon them in fast-changing reality can cause our business to fail, you’re your career to flounder”. He pleaded for a new management paradigm. Also Hamel (2007) in his book The Future of Management embraced the view that a change in management paradigm is urgent.

In articles like van Kemenade and Hardjono (2011) and van Kemenade et al. (2011), van Kemenade (2013, 2014a, b) and van Schijndel and van Kemenade (2011), the discussion what a fourth paradigm for the twenty-first century could be went in several directions. In our search for a fourth paradigm that is fit for the era of rapid change, we looked how we could explain the rise of the Japanese quality management and recent developments in healthcare. Finally, we studied existing quadrants. We studied Hardjono, (1995), Sgme© (van Velzen et al., 2002) and Cinefyn (Snowden, 1999) to see to what extent the paradigms mentioned could be placed in such a quadrant and more important what characteristics that would provide us for a fourth paradigm, that we called the Emergence Paradigm. Our motto was: if you know three, you should be able to trace the fourth. As examples we shall elaborate a bit on the first two quadrants.

Hardjono (1995) designed a four quadrant and used the dichotomy: interior and exterior vs change and control. We can place the Reflective Paradigm in the quadrant of interior control; the Empirical Paradigm in the quadrant of exterior control; and the Reference Paradigm in the interior change. That leaves room for a fourth paradigm that is focussed on exterior and change.

Wilber (2000) presented two other dichotomies: the interior and exterior and individual and collective. He called the upper left quadrant (individual/interior) “I”, what stands for the not-observable aspects of individuals like principals (subjective); the upper right quadrant (individual/exterior) is called “IT” (objective), the observable, measurable physical aspects of entities according to rules. “Its” for the lower right quadrant (exterior/collective) of the observable physical aspects of collectivities that can be related to a model (inter-objective). “We” stands for the lower left quadrant (interior/collective) of non-observable aspects of collectivities. We can place the Reflective Paradigm in the individual interior; the Empirical Paradigm in the individual exterior and the Reference Paradigm in the collective exterior. That leaves room for a fourth paradigm that is focussed on interior and collective.

4.1 The Emergence Paradigm: quality can only be defined for a limited period of time, intersubjectively
The Emergence Paradigm has the potential to prevent quality management programmes to fail. This quality paradigm fits in the current era of continuous change
Emergence is a concept from systems theory. It relates to the development of complex organised systems that have characteristics that are not visible by reduction of the composing parts. "While some experts are familiar with developments in one field, such as artificial intelligence, nanotechnology, big data or genetics, no one is an expert on everything. No one is therefore capable of connecting all the dots and seeing the full picture" (Harari, 2016). Emergence is the process where new characteristics come to existence through interaction between simple, small entities that do not have these characteristics like the self-organisation of ants. Many ants together show a collective intelligence that individual ant does not possess. It provides greater buy-in by employees and it continuously relates to the context, so it will offer context specific designs (as Asif et al., 2009 requested). Systems theory is focussed on the interaction between the system and its environment (as Mosadeghrad, 2014 requested). Lifvergen et al. (2011) made a comparison between planned and emergent change (see Table III). In the Emergence Paradigm, systems thinking is integrated in quality management theory and practices (Conti, 2010; Chen et al., 2014 ). Barouch and Ponsignon (2016) gave an overview of quality management concepts from a systemic perspective. Also in terms of Whittington’s strategic perspectives, we are talking about the systemic perspective (Whittington, 2000).

The Emergence Paradigm is based on John Dewey and his pragmatism. The Emergence Paradigm is not easy to put into a square hole. But, it relates to Wilber’s quadrant of the exterior collective. This is rather about chaos, of which we continuously have to make sense intersubjectively. The Emergency Paradigm defines quality in a dialogue of all stakeholders, not just manager, customer or professional, knowing quality can be different tomorrow. It is about making decisions based on the best knowledge of today, having investigated everything, to the best of our knowledge. That relates to what Crosby (1992) called the culture of consideration. Quality is seen as John Ruskin did: “Quality is never an accident. It is always the result of intelligent effort. There must be the will to produce a superior thing”. Quality does not exist, but arises. In that investigation, in that study we rely on virtues, on morals, on shared values. Pirsig (1991) in his second book Lila knew quite well what quality is. Quality is a dynamic concept. It is value, he says, giving his book the undertitle an inquiry into morals. Pirsig’s (1991) way of thinking fits in the Emergence Paradigm. Summers (1994) stated that Pirsig offered even more: “The importance of his work is that his specific concept of Quality is an original and valuable development of American pragmatic philosophy”.

The Emergence Paradigm sees crises like bankruptcies and ethical misconduct as symptoms. Dewey stated that ethical problems occur in a situation that is bound to place and time. To be able to understand these problems and solve them we need to study the context. The inability to cope with changes in the context is the problem (diagnosis); the Emergence Paradigm seeks the solution in fixes in the processes, adjusting to the context, sometimes breakthrough (Shiba and Walden, 2006) or total reorganisation (therapy). This is done (treatment) by changes in the way we work, by networking and creating a quality culture.

<table>
<thead>
<tr>
<th>Planned change</th>
<th>Emergent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost always accompanies by unexpected Consequences (Livne-Tarandach and Bartunek, 2009)</td>
<td>The outcome is not the preconceived Solution, but the development of the most appropriate solution for the stakeholders concerned (Todnem By, 2005)</td>
</tr>
<tr>
<td>Appropriate for structural changes (Burnes, 1996)</td>
<td>Appropriate for cultural changes (Burnes, 1996)</td>
</tr>
<tr>
<td>Appropriate for economic-based change (Beer and Nohria, 2005)</td>
<td>Appropriate for organisational capacity building (Beer and Nohria, 2005)</td>
</tr>
<tr>
<td>Appropriate for new organisational structures (Bamford and Daniel, 2005)</td>
<td>Appropriate for change process targeting work processes (Bamford and Daniel, 2005)</td>
</tr>
</tbody>
</table>

**Table III.** Planned change vs emergent change based on Lifvergen et al. (2011)
The truth is, what works, said Dewey. There is not one right way to organise a business (see also Burnes, 1996), no single right way to manage people or to manage quality. And what works today might not work tomorrow anymore. What works in the Netherlands might not work on Sint Maarten in the Caribbean. Rather than a symphony with an orchestra conductor (Crosby, 1992, pp. 14, 15), we talk about a jazz combo that continuously improvises within the context. Tools can be quality circles, appreciative inquiry, Socrates Café, while new tools like ACCRA© (van Kemenade, 2013, 2014b) and the R2E2 Dialogue Model (van Kemenade, 2018) are being developed. Lean fits here (but not Six Sigma that fits in the Empirical Paradigm). Leadership is participative or shared (Pearce and Conger, 2002).

In the Hardjono Four-Phase Model©, this paradigm fits in the quadrant exterior change. Hardjono mentioned this creativity, with a relation to disruptive innovation, lateral thinking and investing intellectual capacity. And that is, what has been done in Japan with support from gurus like Dr W.E. Deming. Deming’s ideas and 14 principles go beyond TQM and the Reference Paradigm. He did not want to define more nor design a further model than his 14 statements. When you look at the Deming Prize in Japan you can see that in comparison to other awards like the National Malcolm Baldrige and EFQM Excellence Model only limited norms have been formulated. We think that Deming fits best in the Emergence Paradigm and that his ideas were so successful over there because they were close to the Japanese way of emergent thinking. The four paradigms are presented in Table IV.

<table>
<thead>
<tr>
<th>Empirical Paradigm</th>
<th>Reference Paradigm</th>
<th>Reflective Paradigm</th>
<th>Emergence Paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality is</td>
<td>Conformance to requirements</td>
<td>Quality is fitness for use</td>
<td>Quality is subjective</td>
</tr>
<tr>
<td>Adage</td>
<td>“To measure is to know”</td>
<td>“We need to improve continuously”</td>
<td>“Quality is not a thing, it is an event”</td>
</tr>
<tr>
<td>Focus</td>
<td>Rules, standards</td>
<td>Models, guidelines</td>
<td>Principles</td>
</tr>
<tr>
<td>Aim</td>
<td>Control</td>
<td>Improvement</td>
<td>Professionalism</td>
</tr>
<tr>
<td>Problem</td>
<td>Unpredictability of product and uncontrolability of processes</td>
<td>Suboptimisation</td>
<td>Insufficient self-criticism</td>
</tr>
<tr>
<td>Solution</td>
<td>Take causes of variation away</td>
<td>PDCA</td>
<td>Detaching mechanisms</td>
</tr>
<tr>
<td>Tools</td>
<td>SPC</td>
<td>ISO9000-series</td>
<td>Second opinion, Intervision, Time out, Discussion Stories</td>
</tr>
<tr>
<td></td>
<td>Seven tools</td>
<td>EFQM-model</td>
<td>Quality circles</td>
</tr>
<tr>
<td></td>
<td>Six Sigma</td>
<td>Malcolm Baldrige Award</td>
<td>Inner conversations, shadowing, modelling, peer review</td>
</tr>
<tr>
<td></td>
<td>Joint Commission</td>
<td>Award</td>
<td></td>
</tr>
<tr>
<td></td>
<td>International Accreditation</td>
<td>Quality circles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evidence-based medicine, protocols</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pirsig (1991) Deming Conti</td>
</tr>
<tr>
<td>Competence</td>
<td>Material Statistics</td>
<td>Commercial Management sciences</td>
<td>Socialisation Philosophy</td>
</tr>
<tr>
<td>Sciences</td>
<td>“Hard” sciences</td>
<td></td>
<td>Intellectual Systems theory</td>
</tr>
<tr>
<td>Whittington (2000)</td>
<td>Classic strategic perspective</td>
<td>Processual strategic perspective</td>
<td>Evolutionary strategic perspective Delegating</td>
</tr>
<tr>
<td>Leadership</td>
<td>Directive, technical</td>
<td>Supportive, coaching</td>
<td>Systemic strategic perspective</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participative, Shared leadership</td>
</tr>
<tr>
<td>Metaphor</td>
<td>Army</td>
<td>Robot</td>
<td>Improvising jazz combo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friedson (2001)</td>
<td>Manager in control</td>
<td>Customer in control</td>
<td>Professional in control Arrogance</td>
</tr>
<tr>
<td>Risk</td>
<td>Bureaucracy</td>
<td>Pampering</td>
<td>Chaos</td>
</tr>
</tbody>
</table>

Table IV. Total Quality Management in four paradigms
5. Incommensurability

Kuhn (1962) stated that paradigms are incommensurable. The history of science reveals proponents of competing paradigms failing to make complete contact with each other’s views. Quality management in the twenty-first century, however, needs a combination of ways of thinking and use of several tools and methods from different paradigms depending on the context. Barouch and Ponsignon (2016) support a multi-paradigm approach.

The four paradigms presented in this research need to be integrated. In fact we are talking about epistemic fluency, “the capacity to understand, switch between and combine different kinds of knowledge and different ways of knowing about the world” (Markauskaite and Goodyear, 2016).

In the master programme of Integrated Care from Utrecht University of Applied Sciences the four paradigms are combined and together lead to the required competences of the graduates. The same combination of paradigms is needed in twenty-first century leadership training and also in quality management theory and practice.

One could then discern a fifth square that contains the other four. That then could be the real meaning of Total Quality Management. This is in line with Dahlgaard-Park et al. (2018) who concluded that “TQM should be considered as an evolving management theory which continuously adopt and adapt the changes of stakeholders as well as changing premises and requirements of environments”. TQM needs to be electrical (Rossman and Wilson, 1991; Guillen, 1994; Allan, 1998) and use tools from each of the paradigms depending on the problem to be able to cope with context and change (Figure 2).

6. Conclusion

In quality management four paradigms can be discerned: the Empirical, the Reference, the Reflective and the Emergence Paradigm. At the moment the Emergence Paradigm is the least developed. Following the Emergence Paradigm would mean the incorporation of systems thinking in leadership training, quality management theory and practices. Practicing quality management from the Emergence Paradigm would implicate for an

![Figure 2. TQM based on Wilber (2000)](image-url)
organisation to be open to change and its context, to start a continuous dialogue with all stakeholders on quality, based on virtues and shared values rather than rules, models and principles. It would implicate looking outside and beyond boundaries, it would implicate networking and creating a quality climate and culture rather than control, quality awards or peer review. It would require systems theory rather than positivism, traditional management science or philosophical reflection only then Quality Management will become Total.

Notes
2. This paper is a summary of the findings of our book Quality. Four paradigms that are bound to be published, first in Dutch, in Autumn 2018. The book is initiated by De Goudse School (www.degoudseschool.nl). De Goudse School chooses to set priority to the Paradigm of Emergence.

References


Further reading


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