Extending Quality Concepts to Cope with The Needs of a Global World

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Abstract

The concept of quality is revisited to evidence its applicability beyond the product and economic transaction level, to cover every kind of human and social relation. A very important extension indeed in this globalization era, where an increasingly interconnected world badly needs rules and means to improve quality, both at economic and political level. To that aim, some commonplaces about quality need to be exposed to criticism and the close connection between "value" and "quality" concepts must be highlighted. Generalization of the quality related concepts could appear to be just a theoretical issue were it not for the fact that it opens the door to the extension of "quality management" concepts to every kind of organization: from the company to the state to the planet. "Managing for quality" appears to be a fundamental issue for all human-made systems.

1. Introduction

Quality is a rather intriguing concept on which philosophers have long argued, from Aristotle to Locke, to Galilei, Newton, Hobbes, Cartesius (see References). In the industrial era quality has become a popular topic, but the scope of the concept has consequently been reduced, according to the specific needs of the business context. A pragmatic, business oriented society does not need the philosophers' sophisticated distinctions. Mass production was the main factor affecting the development of the new concepts associated with the word quality. But the post-industrial evolution and the current trends towards globalization may possibly suggest a wide-scope revision of the concept of quality and the associated concept of value.

The fathers of quality - from Shewart to Deming to Juran to Feigenbaum - offered us a lot of deep thinking in the area of business-related quality, in particular *quality management:* how to economically generate the required quality in an organized context.

A.V. Feigenbaum (Feigenbaum, 1983) observes: "Quality is a customer determination, not an engineer's determination, not a marketing determination or a general management determination. It is based upon the customer's actual experience with the product or service, measured against his or her requirements - stated or unstated, conscious or merely sensed, technically operational or entirely subjective - and always representing a moving target in a competitive market". Then he defines quality as "The total composite product and service characteristics of marketing, manufacture and maintenance through which the product and service in use will meet the expectations of the customer"

J. M. Juran (Juran, 2000) offered two complementary definitions of quality, in relation to quality management: 1) those *features of the product* which meet customer needs and thereby provide customer satisfaction; 2) freedom from deficiencies. The first definition is oriented towards increasing income through higher value for the customer (highly appreciated goals, doing the right things), while the second aims at avoiding loss in the delivered value with respect to the promised value (quality of implementation, doing things right), at the same time reducing non quality costs.

In the real world, the above concepts have often been impoverished or distorted. Even the golden quality season of the last twenty years of the XX century was unable to eradicate the incomplete or distorted views of quality. Some examples of those views are reported in the following.

Mass production has largely contributed to narrowing the concept of quality to "conformance", a concept related to implementation, that misses the creative aspects of planning for quality (or better, planning for competitive customer value). Competition in quality in the last part of the XX century has largely overcome that restricted view. TQM models are clearly focused on global performance improvement. The latest version of ISO 9000 has also adopted a wider perspective, with the introduction of the "effectiveness" dimension, beside conformity. But conformity is still seen as synonymous with quality by too many practitioners.

Related to the above is the still diffused concept of quality as freedom from defects (it means taking just one part of the composite Juran's definition). In reality, even if the most advanced interpretations of such concept go beyond conformance to include any deficiency in relation to customer expectations, many of them still miss the concept of continuously pursuing competitive value creation.

Quality has for a long time been related to products. Extension to service is a relatively late achievement. Extension to the organization, brought about by TQM models, is an even more new and less understood concept. ISO 9000 is still ambiguous with its emphasis on the "quality management system", that seems to consider quality management as a separate system. Total quality management requires a systemic view of the whole organization ("the" system, to which management refers) and an integrated - not fragmented - view of management.

A more advanced view is embedded in the definition of quality as "fitness for use", albeit it does not comprehend such qualities that are not valued in relation to use but to other criteria, like for example enjoying ownership for aesthetic or cultural reasons, or as a status symbol.

Talking about conceptual distortions, even if apparently harmless, we can mention the habit to equate quality and good quality. As we will underline later, quality is neutral by its own nature and the quality perception can be both negative and positive; *managing for quality* aims at maximizing quality positiveness. Another apparently innocent distortion is the bad habit of confusing the words quality and excellence (e.g. levels of excellence instead of levels of quality). That again has to do with the wrong conception of quality as a positive attribute, as well as with the wear and depreciation of the word quality due its misuse.

Without doubt the more complete definitions of quality are those related to the ability to satisfy customer expectations better than competitors and beyond what customers themselves consciously expect. In other words, the capacity to be and to act in such ways as to be chosen by customers - and chosen again in time. Such capacity should be coupled with the ability to minimize resource consumption and to improve all the above capacities over time.

The lacking quality definitions, besides being deficient in relation to some aspects of quality, suffer in general from the following limitation: they do not clearly distinguish between two different quality related concepts (or families of concepts): a) *"quality"* as a fundamental, concept related to human-based relations; b) *"managing for quality"*: how humans manage for achieving the quality mentioned under a).

2. The original concept of quality

Aristotle (see Ref.) made a distinction between the different types of quality that, whether accepted or subjected to criticism by following philosophers (St. Thomas Aquinas; Hobbes 1; Locke; Galilei; Newton, Cartesius, see Ref.), still remains as the most comprehensive framework for discussion today. Criticisms mostly came as a consequence of the evolution in the knowledge of the physical world, where some qualities, like gravity or other forces that were before considered as "occult", finally found a physical explanation. Similarly, characteristics that were considered sensible but not measurable at Aristotle times, entered the "measurable" category after Galileo and Newton. For Aristotle the concept of quality is extremely wide and can be hardly reduced to a unitary definition. It should be considered as *a family of concepts that have in common the property of answering a common question* (Abbagnano, 1964). Put in Latin, that question is "Qualis?", that has the same root as quality ("Qualitas"), and means : "which property, or character, or nature, or attribute". Put in Greek - the original Aristotle's language - the question spells "poios" (ποιοζ), which also has the same root as the Greek word for quality: "poiotes" (ποιοτηζ). That means that in the original languages of Western thinking, Greek and Latin, it was clear that quality deals with the properties, characters, attributes of a person, or an object, or a situation. The English language misses a single word for the expression "which property" and consequently the common root between such expression and the word quality.

For our discussion it is not so important to enter into the details of the four categories of Aristotle, or the three of Locke. Instead, for sake of example, it may be useful to mention some of the categories and qualities that are common to the two thinkers: *personal characters,* like habits, attitudes, faculties, virtues; *sensible characters,* like colors, sounds, tastes; *measurable characters,* like extension, geometric form, movement. What is important - and can be derived from the history of philosophic thinking, from Aristotle to our days - is that "quality" is *a property that characterizes a person, an animal, an object, a situation...".* The quotation is from the Treccani dictionary of the Italian language, but the Webster vocabulary reports a similar definition.

As such, qualities have no positive or negative implications. They get such implications when they are associated with the concept of *"value".* Many of the ambiguities that we find in the realm of quality - not the philosophic, but the business related one - are due to lack of connection and harmonization between the two concepts: quality and value.

3. The importance of value in relation to the “qualities”

Since ancient times the term value has been used to indicate usefulness of material goods and dignity or merit of people (Abbagnano). In the realm of philosophy, value was first considered in the context of ethics, as the objects of moral choices. Cicero referred value to what is "conformal to nature or worthy of choice" (Cicero). With conformity to nature he meant virtue, with worthy of choice he meant both spiritual talents - as for philosophy, or art - and corporal gifts - as health, wealth, strength, beauty. Modern times brought the concept of value into the realm of economics and started to associate it with the concept of price. Hobbes provides an early and rather cynic example of such move (and of the relative and subjective conception of value), when he writes that "the value of a man is, like of everything else, his price, what he can be paid for the use of his faculties. Then it is not absolute, it depends on the need and the judgement of somebody else". And he continues "the value of an able captain is high in time of war, low in time of peace" (Hobbes, 2).

The last part of the XVIII century and the XIX century bring about a new emphasis on value, both at philosophical level and at economic level. Value becomes one of the fundamental concepts of philosophy (Kant, Nietzsche) with an increasing division between those who tend to attribute it an absolute, metaphysical nature and those who support its subjective nature. Value becomes also a cornerstone of the new economic thinking (A. Smith, D. Ricardo, K. Marx). Adam Smith, with his famous text *"An Inquiry into the nature and causes of the wealth of nations"* among other things sets the basis for the discussion of economic value, introducing in particular the concept of exchange value. In fact, together with the big theme of value creation in a capitalist economy, exchange value (not so much use value) represents a fundamental argument for discussion among the thinkers of the new science, from Ricardo, to Marx to the many who followed them in the XIX and XX century. It is obviously out of the purpose of this paper (and of the competence of the author) to discuss the development of philosophic and economic thinking about value. More modestly, the author buys from such development a few concepts and some indications that are useful for our more down to earth discussion on quality and value.

First is the issue of subjectivity/objectivity in relation to values. That remains an open issue for both philosophers and economists. It seems correct to assume, just for our practical purposes, both the subjective and the objective nature of value. With no doubt value can be relative and subjective (think the Hobbes example above, or the fact that the same glass of water can be of great value for a thirsty person in a desert place and of negligible value in normal circumstances). In economics, relativity of value has been justified with the "marginal utility" law (Wieser, 1884): when a plurality of similar goods is offered, the individual good loses its value to the extent that other units can substitute it and are available. In reality the good does not lose its intrinsic value, but the perceived value diminishes (producers should be careful: such value remains important anyhow and must be fully present, see below about the "must be" qualities).

The Maslow pyramid (Maslow, 1953) tells us a lot about relativity and subjectivity of values. In business, big efforts are usually made to identify shared value perceptions (customer expectations) and also to make subjective value perceptions converge into objective or at least widely shared value perceptions, trough advertising and fad creation. While psychological manipulation of value perception to create customer needs is considered legitimate - at least to a certain extent - in the area of commercial relations, it is less so when higher level values are at stake (escalating the Maslow's pyramid). That must be considered when extending the quality/value concepts to the personal and social relations domains. When entering such domains, respect for people and their rights requires that inner values be considered - *a priori* - subjective and their subjectivity be highly respected. That holds true in particular in relation to fundamental beliefs (philosophic, religious) and traditions (history provides numberless examples of imposition of ethical or religious values, that were considered natural and therefore objective by the rulers, with disastrous consequences; that is a typical character of fundamentalisms).

However, social life requires that some fundamental values are shared and converted into agreed upon laws and rules. That is a necessity for living together, that was recognized since the times of the Greek *polis* and is a founding principle of liberal democracy today. The challenge is to reach the best balance between individual rights and collective requirements. The guiding principle should be that original sovereignty belongs to individuals, who freely give up parts of it to the social institution. Which parts? Those that, thanks to such transfer, provide a higher return in benefits for all the members (the citizens). Constitutions deal with that delicate problem of balance of sovereignty. The problem is even more complex today, due to the fact that levels of sovereignty tend to increase in a global world. What is interesting is that, if properly done, such transfer of sovereignty on some values can result not in a loss but in an increase in value perception for the whole community, who becomes more cemented by sharing those values. Shared values create in fact a "sense of belonging". We will see that this is a fundamental issue when discussing the extension of quality concepts to the national and international systems. But even at the company level the problem of balancing shared values - a condition for excellence - with individual inner values is extremely important.

The second indication that we can derive from the philosophic and economic science development is that economic, meta-economic and non-economic values have the same conceptual roots (we use the expression meta-economic - from the Greek μετα = after, beyond - to indicate those values that may be part of business relations but transcend the purely economic dimension). In fact they were born as branches of the same philosophical tree and so remained for centuries; they started dividing when the first industrial revolution fostered economic thinking and a separate economic science developed (with Adam Smith). The power and prevalence of economy in the industrial society and the central role of value in commercial relations somehow obscured the once prevalent issue of value in human relations. It makes sense trying to re-discover the common roots and check to what extent the value concepts that have become so relevant in the last decades in the area of quality in economic relations can be transferred to the meta-economic and non-economic areas.

The third is a consideration and a warning. When talking of economic value we look at it from the quality perspective, that is the value perception by the purchaser or by the user. That means that we do not refer to value from the "exchange value" perspective (in particular as the earlier economists saw it). Ours is a "use value" perspective, however not coinciding with that of the classic economy. If a link with the economic science is searched, it can be found with the psychological view of value, the Austrian school and the *marginal utility* theory (Wieser, 1884), (Jevons, 1879).

On our way to the extension of quality related concepts we will proceed by steps. First, a conceptual re-visitation of the relationship between quality, value and purchasing decision in economic transactions. Second, the issue of value proposition and value generation, i.e. *managing for quality*. Third, the extension of the above concepts to the meta-economic and non economic areas

4. Quality and value in economic relations

Economic relations can be schematically represented as in figure 1, where the upper part of the figure refers to the primitive form of transaction - bartering - and the lower part to the modern form, where money is used as a conventional standard for measuring exchange value.

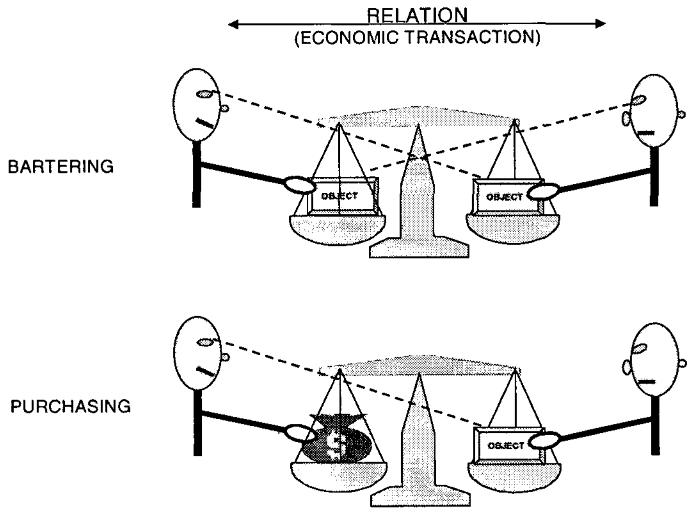

Figure 1. The economic relation takes places between two persons (or between a person and an organization, or between two organizations). It implies a second type of relation, between the persons and the object of the transactions (dotted lines). The perception of quality emerges in the latter relation, but it becomes significant in the context of the former relation.

Economic relations (person to person, person to organization, organization to organization) always imply another relation, that is schematically represented in Figure 1 with the dotted lines and in more detail in Figure 2: the relation between the purchaser and the "object" of the transaction, aimed at appreciation of the object's value (for sake of simplicity we will consider only the values associated with the object, ignoring those values that are associated with the primary personal relation depicted in Figure 1, that we classify as meta-economic values).

We have seen that quality means any property or attribute of an object, animal, person, situation, activity... (since we are referring here to economic transactions we will briefly use the word "object" to identify the object of the transaction, whatever its nature, material or immaterial). Quality is a neutral attribute, until it comes into relation with a subject (or a multiplicity of subjects, sharing the same needs in relation to use) who attributes *value* to it. Such value can be: *use value*, relative to goods for which *fitness* for *use* is what counts more to the purchaser (as for example computers or manufacturing equipment); *possession* *value*, relative to goods for which possessing and exhibiting them is the main purpose (like jewelry or pieces of art); *experience value*, where the intimate experience that the goods or service allow is highly appreciated by the customer (like a unique tourist/cultural experience).

Value can span from negative to positive, through different degrees of appeal or dislike. Through a kind of transposition process, the positive or negative value that the subject associates to a given feature, or "quality", transforms the objectively neutral quality into a subjective (or inter-subjective, i.e. shared between a multiplicity of subjects) positive or negative quality. The judgement of value arises in the subject's mind by comparison with a *scale of value*, that can be personal, or commonly agreed upon within a given population, or an accepted standard. An object in fact normally offers a number of "qualities", some of them important (to different degrees) for the purchaser or user, some unimportant, some not even perceived. Level of importance, or interest, varies accordingly to the person or the homogeneous group of persons who enter in *relation* with the object (Figure 2).

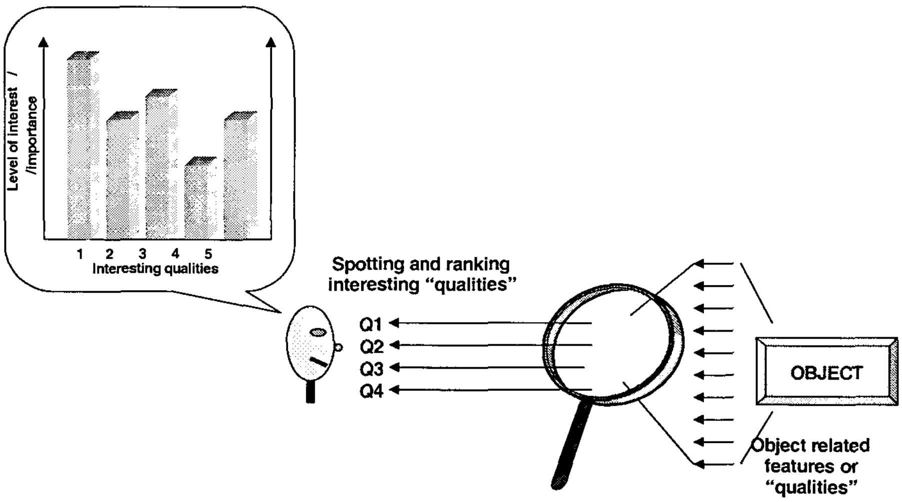

Figure 2. Entering in relation with an object, a person mentally selects those "qualities" he/she is interested in and classifies them according to the perceived importance

In the most common case where the purchaser's interest is *use value*, the importance judgement of Figure 2 is normally (statistically) shared by all the members of the user population who have the same usage requirements, and will be the same in front of all the objects of the same kind, i.e. intended for the same use. "Importance" tends then to be a rather objective criteria, for a given product/user segment (in theory all the vendors could join forces to obtain the "level of importance versus qualities" grid).

It is interesting to note that the level of importance pattern does not necessarily coincide with the "expected value" pattern (see figure 3). The Kano model (see below) can help to explain at least some of the reasons. If a quality has become a "must be" quality, users implicitly expect a near perfect level of value for it but, since they give it for granted, they will not consider it as high priority. "The tongue ever turns to the aching tooth": experience shows that users change their level of importance judgements according to the situation, giving more importance to those qualities that, now, are at the same time important and critical (below expectations). That is a very interesting consideration, that brings our discussion on quality in economic relations very close to the psychologists' conclusions, in relation to value in meta- and non-economic relations. Meinong and Ehrenfels, borrowing from the economist's marginal utility theory, discuss the value perception as a result of both desirability of the object and scarcity or plenty of it (Meinong, 1928) (Ehrenfels, 1897/98). A "must be quality", according to Kano's definition is in fact a situation of plenty, where the user quite often does not perceive the need of high value associate with that quality because he gives it for granted, but the vendor should be aware of it, since it is a value that should be provided at the highest levels.

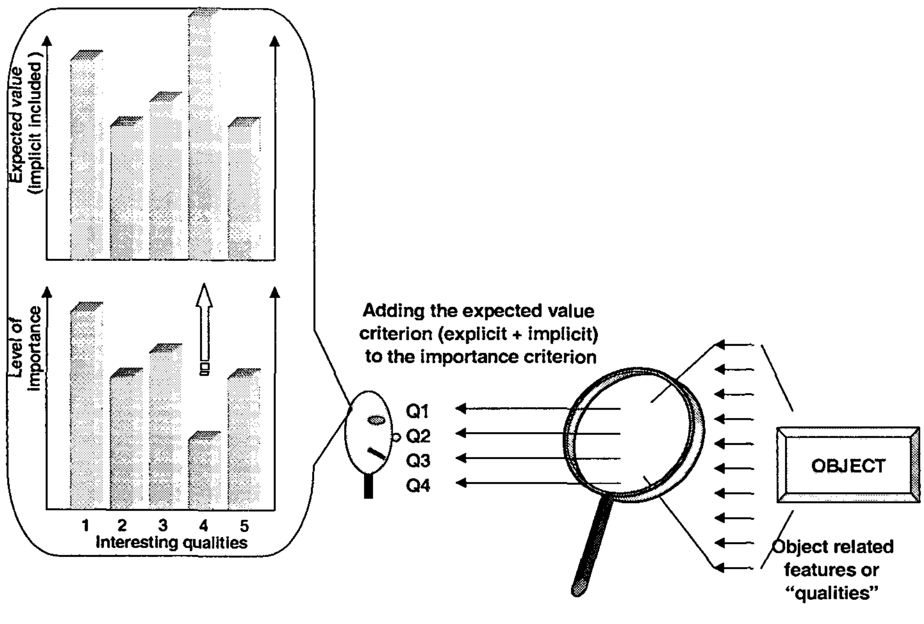

Figure 3. Importance and expected value do not necessarily show similar patterns(see for example quality # 4, a "must be" quality)

Vendors normally make "importance versus qualities" surveys. They take it for granted that the importance pattern coincides with the "expected quality" pattern. In this section, where value is considered in the purchaser perception, we could ignore the difference between importance and value expectation. We take it into account because we want to put ourselves in an informed purchaser's place, but mainly because this discussion is preliminary to the "managing for quality" discussion, where the vendor should be well aware of the difference.

Figures 2 and 3 represent the "screening process" that normally takes place in the purchaser mind *before* expressing a value judgement on the *specific* object that is under examination for possible purchasing. Then comes the real "quality judgement" based on the appreciation of the totality of values of the specific object. Figure 4 represents this stage, that consists of a mental comparison between two patterns: value perceptions and value expectations, where expected values are derived - as previously noticed - by adjusting explicit customer perceived importance on the basis of an analysis of implicit value requirements.

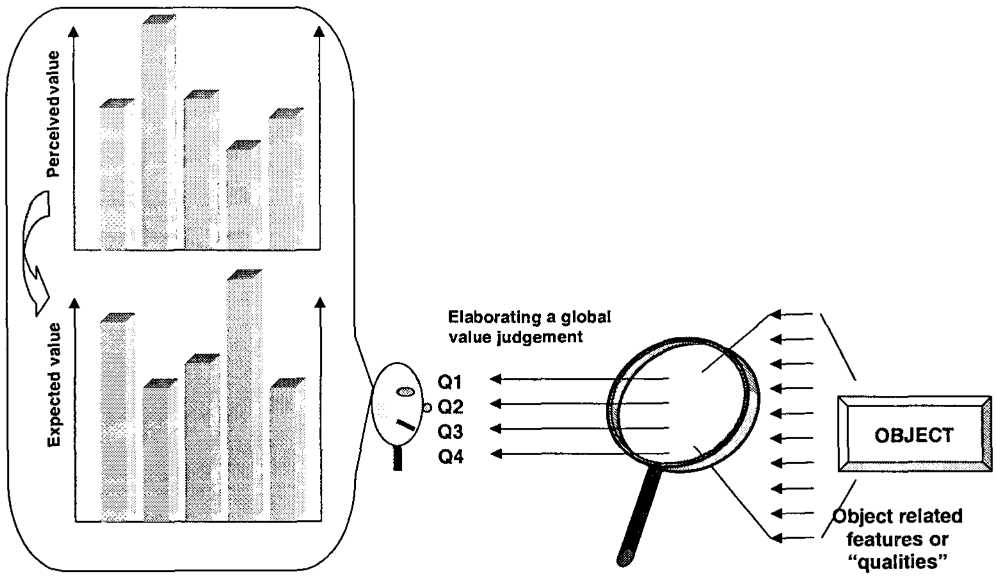

Figure 4. Elaborating value perceptions about the qualities of the specific object by comparison of perceived value (upper diagram) with expected value (lower diagram). The less the perceived value "pattern follows the trend of the expected value" pattern, the lower the appreciation of the object by the potential purchaser.

Obviously the value judgement is always partly subjective, depending on the type of goods that are traded. In the case of convenience goods featuring well defined and standardized characteristics, the value judgement among homogeneous consumers has small variation and so does the price. In the case of special or rare goods the value judgement can show big variations and the more so when we move from "use value" to intangible values linked to aesthetics, or personal experience or status.

Figure 5 summarizes the entire logic process that - in the author's view - drives purchasing decision in economic relations. Steps 1 to 4 have already been considered, but some more comments are provided in the list below, while the figure aims to transmit the concepts in a more direct, visible form. Step 5 represents the conclusion, a positive or negative decision about purchasing. Customer satisfaction obviously depends on the confirmation of the positive purchasing decision through direct experience with the product, both fitness for use and reliability. Since customer satisfaction is a precondition for the vendor's success in business, understanding such logic process and managing quality accordingly (see in the following) is also key to vendor satisfaction.

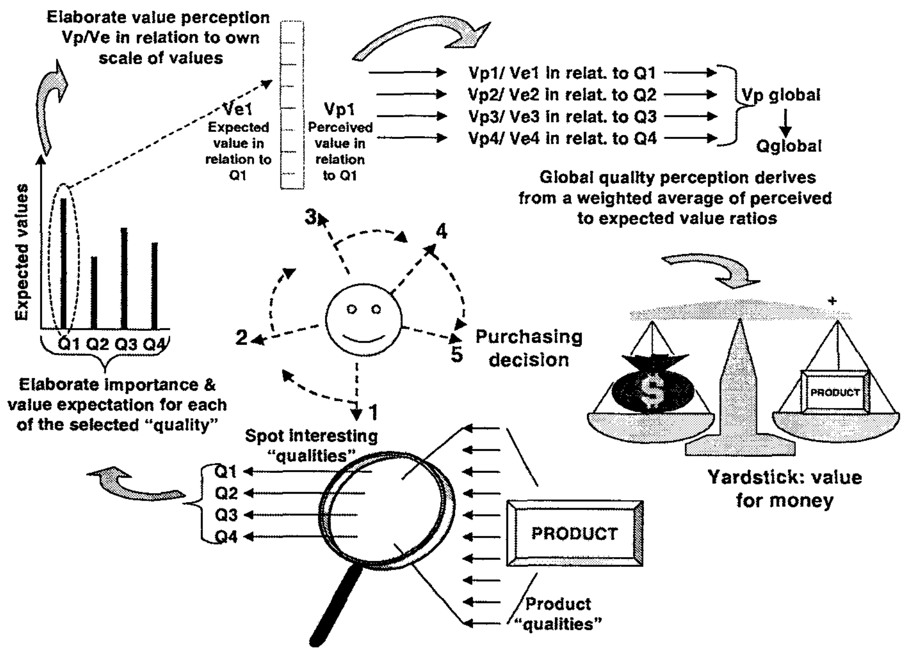

Figure 5. Economic transactions: the process flow that drives the purchasing decision

The steps of the potential purchaser's mental process are the following:

1. Select, among all the good's features, those that the potential purchaser is interested in (if top priority is fitness for use, for example, all those characteristics that are related to usage; if top priority is status symbol value, all those visible characteristics that impress people)
2. Recall, digging into one's own and other people experience, the judgements of importance in relation to the selected features (that can be done mentally or analytically, depending on the importance or criticality of the transaction). Possibly complete it with an analysis of implicit expected values that do not emerge when explicitly searching for importance. The result is an "expected value" pattern, in relation to the interesting qualities.
3. Elaborate "value perceptions" for each of the selected features, by comparison with the internal scales of value made visible by the "expected value" pattern. For each feature the result of the comparison between perceived and expected value (Vp/Ve) can be negative (offered value below expected value) or positive (offered value above expected value, with a crescendo that can reach enthusiasm).
4. A mentally weighted sum of the results of the above comparisons is made, that can be considered as the global value perception in relation to expectations. That is normally called the "quality perception" a conventional and synthetic way to say "the global *value perception* in relation to the interesting *qualities*".
5. Finally, global quality perception (or more precisely, global value perception in relation to the interesting qualities) is balanced against price (*value for money*) for the final purchasing decision, taking possibly into accounts alternative offerings.

We can conclude this section with some statements that are instrumental to further discussion:

- *The concept of quality is intrinsically associated with the concept of relations* and to the value perceptions that people derive from such relations.
- The economic relation is a transaction between persons (or organized groups of people) where the quality judgement mainly arises from the relations between the transactors and the objects of transactions.
- *Qualities* are the characteristics of the traded goods that are significant for the purchaser, *the vehicles of value* that drives purchasing decisions.
- The global value perception in relation to the above qualities is normally called the quality perception

In the next section we will complete the analysis of quality in economic relations by briefly recalling the main issues related to the second aspect of quality: *how to generate those qualities - or more precisely the values associated with those qualities - that are relevant in the economic relation.* It is the issue of managing for quality, the major problem indeed from a practical perspective, the one that has drawn the attention of experts since the dawn of the industrial era.

5. Quality from the vendor perspective: creating value for customers

Perceived qualities and their relative importance must be explored and identified by the vendor who wants to win and retain customers. Expected values (explicit or latent) in relation to such qualities should be identified in order to make competitive *value propositions.* Added value perceived by the market is in fact key to increasing the income side of the profit equation, either by increasing prices or by increasing market share, as market circumstances may suggest.

Figure 6 represents the flow of processes that should take place to ensure that the best endeavor is made to effectively generate the customer expected value. The first step - a) - is the identification of the product/market segment(s) that is (are) going to be addressed by the company's offer. That may seem an obvious statement, but in fact it is not: many companies do that in a superficial way, creating the preconditions to generate either deficient or excessive value. Step b) deals with correct identification of potential customers' expectations, a very critical process, where customer focus capability makes the difference. It provides the input to step c) in figure 3 that has been named QFD to indicate not necessarily the specific approach that normally goes under the name of Quality Function Deployment, but the logical process that should be followed to pass from customer expectations to the company value proposition (Akao, 1989; Hauser et al., 1988; Kaplan & Norton,1996; Hamel et al. 1994; Cole, 2003; Watson, 2001 and 2003).

Phase c) is the most critical from the point of view of value generation. In fact, while phases a) and b) deal with the fundamental prerequisite of correctly and exhaustively reading and interpreting market expectations, phase c) brings into play the competitive edge of the company in terms of creativity and distinctive competence. The formal value proposition, or offer to the market, is the following phase (d) that on one side determines "the promised quality" (e), on the other side provides the specifications for product/service development (f). Steps a) through d) deal with *value creation,* or *quality of objectives* while steps f) through h) deal with *quality of implementation and delivery.*

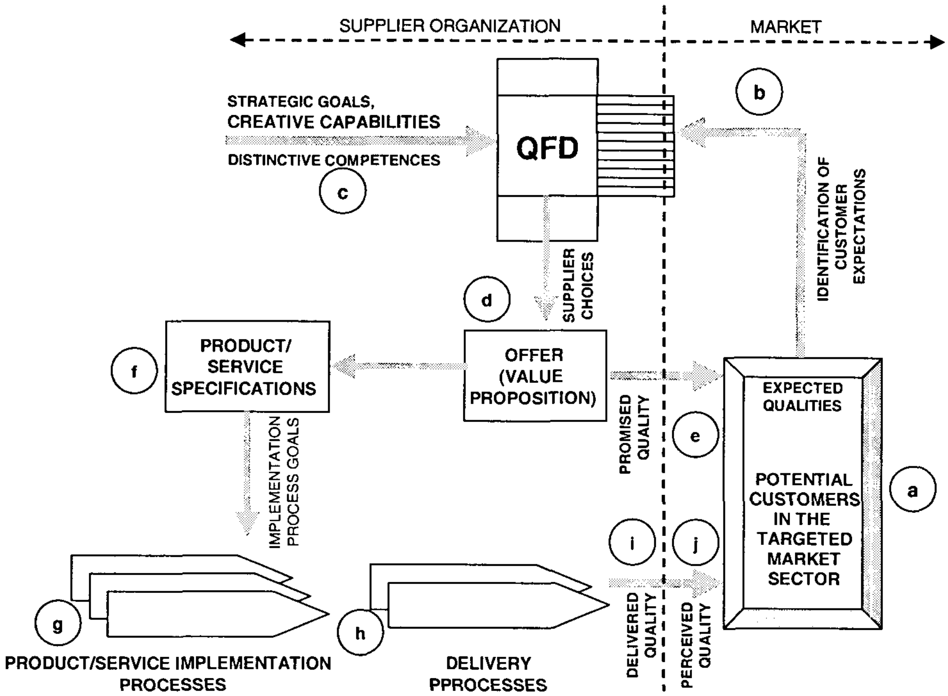

Figure 6. Value creation for customer: from the understanding of customer expectations to the value proposition, to the implementation and delivery of the products and services

About value creation reference should be made to Noriaki Kano's model (Kano, 2001; Kano et al.1984), a fundamental step in understanding the dynamics of customer satisfaction, particularly "attractive quality" creation. We have already recalled the concepts of implicit, or "must be" quality, in relation to the problem of getting a reliable "expected quality" pattern. The concept of "attractive quality" too suggests deeper than usual analysis of expected quality patterns, to identify those expectations that may be deep in the heart of users but mostly in the form of dissatisfaction with present products and services - or sometimes in the form of dreams - but do not usually emerge as explicit requirements.

Suppliers should also be aware that value for money judgements made by the customer at the time of purchasing are incomplete, since they lack the reliability dimension (value perception in time and in real use). Then the importance of getting appropriate customer satisfaction information in time, during real use.

Moving now to the execution phases (f and g in Figure 6), two are the issues: first to preserve the promised value (the problem of *conformance*), second, to do that with the minimum use of resources (the problem of *efficiency*). This second aspect deals mainly with cost, the second term of the profit equation (first was income, related to value).

Quality in implementation is the traditional aspect of quality, that has worried producers since the transition from craftsmanship to mass production. We know that the intense and enlarged competition of the last decades has fostered the pursuit of new approaches aimed at improving quality management. We will briefly recall here those aspects of quality management that have proved to be the most critical in companies and that the author believes are critical in non profit making organizations as well.

The cornerstone of quality management is *the systemic view of organization* (Bertalannfy, 1983), (Scuricin1, 1985). In fact, the more the organization is complex, the more difficult is to focus all its members on high value objectives and to keep performance consistently high. Recognition that the organization is a system - and a *holistic system*, where interactions between the parts deeply influence performance - is essential in order to reach high quality results (where quality results in business means being chosen by customers, satisfying stakeholder expectations and doing all that with minimum use of resources). In the history of quality many efforts have been made to make the organizational system tamable. Quality control, quality assurance, total quality management were some of the historic names of those efforts, not to mention the myriad of approaches that grew up in the last twenty years. All those approaches were based on explicit or implicit quality management models (ISO 9000, Malcolm Baldrige, EFQM are the best known examples). The need for models arises from the complexity of organizational systems, that cannot be managed unless simplifications are made, that take in fact the form of models (quality management models in our case).

The problem with models is that they are too often interpreted in a dogmatic way, as mirror images of the organizations (as far as the purpose of the model is concerned), whereas they are more or less sketchy representations of them. And they are interpreted in a mechanistic way (scientific management is still printed in many managers' DNA), whereas the organization is a living system, made of people. As a consequence, many of the real - and often hidden - relations between the system's parts (between people, functions, processes) escape control, making results inappropriate or unpredictable. Taking system models too rigidly, however good and comprehensive they may be, leads to bad surprises. Unless...unless a pragmatic PDCA approach is used, where the model itself is constantly kept under scrutiny and adapted (Conti, 1997).

The Plan-Do-Check-Act cycle (Deming, 1986) can be considered as a universal approach to both problem solving and organizational improvement. The rationale for its use in organization's management is that, however good is your planning (and the organizational model you refer to), it will never be perfect, because of the systemic nature itself of organizations, where you can hardly capture, in the planning phase, all the possible links between systemic factors and between them and results. If you cannot capture all the links you cannot guarantee results. A more rational (and humble) approach is to systematically adopt a cycle that allows for testing the hypotheses and then correct or improve.

A lot of discussion has gone on in the past twenty years about ISO 9000 and TQM models. For sure TQM models are more complete in describing the organizational dynamics. In fact they were conceived for continuous performance improvement, while ISO 9000 was originally conceived for recognition of the existence of the basic requirements for business to business relations (the new ISO 9001 still has that aim, while ISO 9004 has a wider scope). However, even the best, customized model is intrinsically unable to interpret all the system's behaviors.

Obviously, any effort should be done to get the model represent at best the specific organization's idiosyncrasies - and to make the best possible plans. But consciousness of the inherent complexity of organizational systems (in particular their high human content!) should always suggest to follow the PDCA logic cycle. Doing that, even effects that cannot be satisfactorily explained by the chosen model will set in motion specific analysis to identify the hidden causes.

The PDCA cycle concept can be applied to any activity, when hitting current targets is the issue or, even more challenging, setting higher targets. However, its major application is at the corporate business cycle level (or, more generally, the whole system level). In that case phase "C" (Check) is the annual organizational self-assessment, followed by phase "A", where corrections and small scale improvement are introduced. Phase "P" (Plan) is the phase that mostly benefits from the outcomes of phase "C". Planning will certainly improve if the experience gained in the previous PDCA phase is fully exploited; moreover, contextual planning of business goals and system improvement goals is a critical success factor. Goal deployment, down to the process level, is also a critical part of the "P" phase and leads the way to effective process management, the key factor in phase "D", execution, in relation to both quality and cost/time efficiency.

6. Extension of quality concepts to social/political relations

We concluded the section on quality in economic relations with the statement: "*The concept of quality is intrinsically associated with the concept of relations* and to the value perceptions that people derive from such relations". This is the rationale for the extension of quality concepts to all human relations.

Let us take Figure 7, that provides a scheme of human-made organizations, from private enterprises to political organizations. The first are the expression oh human entrepreneurship, desire to join efforts to achieve results; the second respond to the need to create favorable social environments for the development of people and the organizations that they create. The figure supports the idea that quality concepts should be extended upwards, to the more complex international organizations. Are all those organizations depicted in the figure characterized by relations? Yes, they are relation intensive, both internally and externally. Political bodies are in fact the guarantors of correct relations. They are supposed to do little on their own, but to create propitious environments for individual and enterprise activities and relations. Is there expectation of values in those relations? For sure yes: both people and organizations have their value expectations, economic and non-economic. Is satisfaction of such expectations important? No doubt: dissatisfaction at social/political level can have heavy negative consequences.

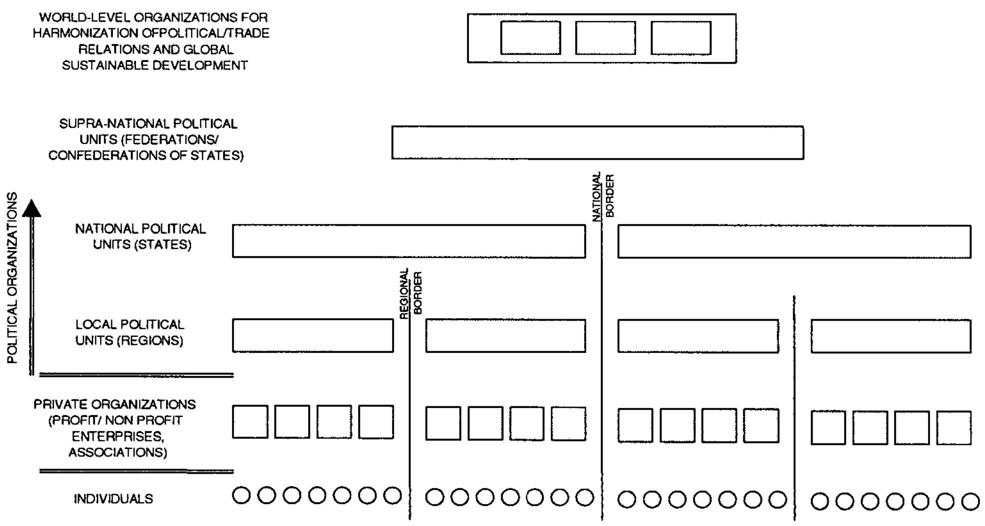

Figure 7. Quality concepts are extensively applied to private organizations, to some extent to local and national public administrations. They should extend to all social/political relations, up to the global international relations

Can *quality management* be reasonably applied to social/political organizations? The answer to this question, too, is necessarily positive. In fact, complexity, a typical character of social/political/trade issues, particularly at international level, requires systemic thinking and sophisticated analysis and problem solving tools. Why not using, among the others, appropriate quality management methods and tools, when building and operating complex international regulating mechanisms?

Quality is usually a twofold problem for organizations:

1. Inwards: every organization, from companies to nations, have the problem of understanding and satisfying the legitimate expectations of their members. That should be a goal in itself (for political organization the main goal), besides being a precondition for effectiveness. Companies know that very well and so do politicians. The problem is particularly important today at national level. Many developed countries have since long established effective systems and rules for peaceful and fruitful internal relations among its members (individuals, organizations, regional governments). Other countries are on the way. Liberal democracy seems to be a rather widely accepted framework for internal relations, even if, to be really accepted, rules need to be adapted to the specific cultural framework - and that takes time.
2. Outwards: satisfying the expectations of customers and stakeholders is a generally accepted concept in business. In the case of social/political organizations there are no customers. Traditionally there were allies and competitors and the way of solving conflicts was often bloody. A civilized approach today - let alone a quality approach - is necessarily peaceful and aiming at partnership. We are a long way off a real acceptance - at the international level - of something similar to the democracy that we welcome at home. The code of rules for such relations, as the basis for "managing for quality", is in large part to be written. And the structures that should make the systems work have to be built or improved.

Space reason do not allow for a detailed discussions of all the above topics. We will conclude our analysis by taking just one point, that we believe is critical for all organizations, from companies to states: intangible values that permeate and make internal relations alive and fruitful. We will look at two types of those values: shared values and functional values.

Shared values have been widely recognized as important factors for developing a positive organizational identity and a sense of belonging among its members, factors that favor people involvement and contribution. What criteria should be followed when searching for the organization's shared values? Are there absolute values, that as such can be easily accepted and shared by all the organization's members?

Philosophic and religious discussions about the absolute/relative nature of values - if they exist independent of man and history or not - are totally out of the scope of this paper. Such issue is obviously significant in relation to the innermost values, embedded in the sphere of personal beliefs and choices. The author believes that the search for shared value, in the case of business organizations, as well as social/political organizations, should exclude the area of such innermost values (the peak of the Maslow pyramid) even if he recognizes that such deep personal values can be among the most powerful motivators and as such should be highly appreciated when present (for a thorough discussion of motivation and organizational behavior see Park & Dahlgaard, 2003). Such values deserve so much respect that our main concern should be to protect them from any attempt of exploitation, even for the apparently most noble cause. We take them into consideration only as part of the human rights that must be respected in any type of human and social relation.

Since our discussion is limited to *social relations*, that take place within, or between, *organizations* (as those depicted in Figure 7), it seems correct to limit the choice to the area of those basic values that are related to personal and group *relations*. Among them, it seems correct to select values that, in the specific social/ethnic/geographic context (and possibly world wide when international relations is the issue), are largely perceived as positive, natural, beneficial for the organization's members. Typical examples of such values (that in fact are largely shared in many cultures) are: mutual respect, trust, fairness, honesty, cooperation, team spirit, attitude to collective learning. Obviously, not everybody in the organization will be happy with the choice, but even democracy does not mean unanimity. Shared values should be such as to make the organization effective and efficient, but at the same time a nice place to live in together.

Besides basic values - that determine behaviors (the organization's style) and organizational climate - organizations need a continuous exchange of intangible *functional* values, those that support the creation of the "products" of the organization. Typical are information, directives, how-to instructions: the dynamic asset of knowledge and experience of the organization. Application of quality concepts requires that rules are defined first at the basic level (statutes, articles of association, charters, constitutions, by laws, system models), then at operational level (processes and procedures). Education in basic values and rules and training in operational rules is fundamental. Everybody should know what the expected values in the relevant hierarchical as well as functional relations are, who are one's own internal customers/suppliers and their expectations. However, the intelligent-system view of organization suggests that, whatever the rules, a constant eye be kept on results, both final and intermediate (in processes). When shifts, unbalances or irregular behaviors are perceived that go beyond the capability of existing controls, intelligence intervenes to understand the problem, correct the course and possibly adapt the system.

7. Conclusions

Is it presumptions to think that quality, not so much valued now even within its traditional realm, business, can contribute to the solution of problems that are among the biggest that humanity is facing today? It may be, but the stakes are so high that it is worth making the effort. In fact, with quality management we intend just a rational approach that can be applied to any human activity. In proposing it we do not presume to teach managers how to improve their business, or politicians how to make their countries more prosperous. We suggest to use some universal tools and approaches that seem to be indispensable to run complex organizations. They are: tools for improving planning, by better understanding the dynamics of value in the main organization's relations; a systemic approach that aims at better interpreting and monitoring the cause-effect relations that take place in complex social/technical systems; models that help understanding, through appropriate simplifications, the complexity of the organization's behaviors; a PDCA cycle that strings the above together in a way that helps converging towards the goals and progressively improving performance.

The more organization become complex, the more they need tools that help taming complexity. The globalization process that is going on worldwide implies ever more complex processes, both at trade and political level, not mentioning the global environment. The effort to apply quality management tools to globalization related processes should be seen as a moral obligation.

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