The managerial principles behind guild craftsmanship

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Abstract *The craft guilds of old are prototypes for the legend of European craftsmanship. This paper discusses three managerial principles used by the guilds: regulation, standards of accomplishment, and apprenticeship. The rationale behind, and the implementation of, each principle is outlined with reference to historical sources on guild operations. A consistent weakness of guild administration on these principles has been a bias toward self-interested conservatism. As science and technology progressed, society has responded by abandoning guild administration in favor of independent professional organizations. The paper concludes by noting that, while independent professionalism is progressive, it also minimizes the benefits that guilds obtained from experience-based knowledge.*

We know that a belief is commonly held when it is parodied in daily life. Take, for example, the following from the comic strip Calvin and Hobbes:

> Calvin: We don't value craftsmanship anymore! All we value is ruthless efficiency, and I say we deny our own humanity that way!
>
> Without an appreciation of grace and beauty, there's no pleasure in creating things and no pleasure in having them! Our lives are made drearier, rather than richer!
>
> How can a person take pride in his work when skill and care are considered luxuries? We're not machines! We have a human need for craftsmanship!
>
> Calvin's teacher: You had two days to write that paper.
>
> Calvin: Two days! Two days is nothing!

Calvin is expressing a common belief that hand-crafted goods are superior expressions of a uniquely human spirit. Scholars not only agree but go on to claim that the day of craftsmanship, of pride in work, and of independently expressing one's best have been forsaken in the quest for greater profits through automated production of mass-marketed products. Take, for example, the following commentary in an organization theory journal:

> Quality started at a very high level before quantity management ever came along. Quality then started dropping as quantity went up. Nobody noticed this, however, until quality dropped below a tolerable level – a zero point beyond which consumers had trouble differentiating the product [from] a pile of junk (Hummel, 1987).

This paper is not about whether the ideal of craftsmanship is valid. Instead, it is about the managerial principles that seem to account for a widespread belief. Specifically the paper is an inquiry into the managerial principles used in prototypes of craftsmanship, the European craft guilds (Piore and Sabel, 1984).

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The inquiry led to a respectful view of our ancestors' managerial accomplishments. The principles associated with those accomplishments were found to form a platform on which modern managers continue to build. The paper focuses on just three principles in that foundation:

(1) regulation;

(2) standards of accomplishment; and

(3) apprenticeship.

As a prelude to those principles and their modern relevance, we need to discuss the methodology used in this study and the social context within which the guilds operated.

Learning from guild history

Readers of this journal know that a historical inquiry is only one version of an irretrievable truth. The limitations of historical inquiry are especially acute when, as this noted historian notes, there is a scarcity of historical data:

> Yet we still know astonishingly little about how the guilds worked, who ran them, what actually went on inside the guilds, and how much guild life meant to masters (Kaplan, 1986).

In addition to data inadequacy, the specific difficulties of studying guild management include: a broad set of contexts in which guilds have operated, a profusion of romanticized and demonized myths, and an abundance of social issues that could bog down an analysis of managerial principle.

Intuiting generic principle

This study posits the existence of generic principles of guild management despite a diversity of source disciplines (from economic history to the sociology of work), differences in historical period (from the twelfth century to the industrial revolution), and cultural contexts (from Japanese folk crafts to English commercial trades). This concentration on generic commonalities is made at the cost of downplaying important variations that are a legitimate subject for further study.

Getting beyond myth

As one of mankind's enduring institutions, guilds have been reviled by kings and honored by philosophers (Lequin, 1986). They have been emulated by unions and condemned by the church. The romanticized and demonized propaganda that served these defenders and detractors have become irretrievably mixed with the objective data we need.

Scholars normally deal with the mixture of myth and fact in the historical record by analyzing primary sources. Since our ancestors did not think of management as a distinct body of principles, they did not ponder on or analyze the rationale of their practices. Therefore, this study used secondary material to search for commonalities across different settings and time periods. However, only those results that withstood the tests of cross-referencing and logical

consistency are presented and only representative and major references are cited.

Finessing political debates

Guild history has fueled controversies in socio-political theory for ages. Examples include: the importance of skill and solidarity in political independence, the role of independent trades in fostering anarchy or progress, and the liberating versus dehumanizing impacts of technology and capitalism (Black, 1984). This inquiry tried to finesse such issues by focusing on the operational side of guild management. For example, the focus was on the content of regulations and standards of accomplishment and on the behavioral process of apprenticeship training.

It is nevertheless important to acknowledge that guilds have endured precisely because they serve many social purposes. The next section then outlines the influence of social issues such as individual security, the balance of craft and work on subsistence, and social status on the implementation of managerial principle. The scope of this section is purposely limited and assumes that readers of this journal are familiar with the broad outlines of craft guild history, namely:

- the mission of guilds to promote a specific trade in a specific locality (Unwin, 1963);
- the organization of guilds into master-owned shops employing journeymen and apprentices (Lunt, 1956); and
- the historical trajectory of guilds from Roman times to legislation outlawing them in most European countries (Thrupp, 1963).

The social context of the guilds

Guilds existed at the beginning of this millennium and remain influential today in many crafts and cultures. A register of the guilds of Paris in 1300 shows their strength in the period of most concern to this paper. The register records some 6,000 artisans in 448 different guilds. In order of size, the larger craft guilds were weavers, skinners, goldsmiths, tailors, bakers, masons, carpenters, and butchers (Pounds, 1974). Parisian guilds were strong because they served both their members and society (Hickson and Thompson, 1991). Among their functions for members were personal security, assurance of a reasonable livelihood, and social status.

Solidarity against threat

The early guilds of France have been called “artificial families” (Michaud-Quantin, 1970) and those of early Germany “religious brotherhoods” (Kieser, 1989). The reference to solidarity is also expressed in guild charters, for example: “for friendship as well as for vengeance we shall remain united, come what may” (Bloch, 1961).

As these voluntary communities grew, social benefits expanded beyond protection against marauders. Added benefits included income during sickness and bequests to widows and orphans (Hudson and Hunter, 1981). Such benefits were far from ancillary in times when accidents, wars, and plagues were common. In short, personal security was a bedrock purpose of the guilds.

Craft and subsistence

Far from being prosperous artisans, most guild members lived close to the margin of subsistence (Edgren, 1986). Producing goods provided only a supplementary income for most, and rural artisans spent much of their time tending the land (Smail, 1992). Urban craftsmen spent as much energy tending shop as producing wares (Unwin, 1963). In short, the focus of guild members was on stability of a reasonable livelihood rather than on the expression or perfection of an art.

Solidarity and shared pride

For most of this millennium, people believed there was a divinely ordained, hierarchical structure in society. As Cynthia Koepp (1986) puts it: "Every being had its own place … [one's] duty consisted in fulfilling his responsibilities and staying put". The lowest position on this "great chain of being" was that of a manual laborer which Diderot's *Encyclopédie* portrayed as: "a mindless automaton who depended on instinct rather than intellect, who bespoke body rather than mind" (Koepp and Kaplan, 1986). Possession of a recognized art gave artisans a distinctly higher status. We would be wrong, however, to use the modern connotation of art to express the importance of that term to our ancestors. As William Sewell (1980) points out:

> … art was not a matter of originality, inspiration, and genius, but of rules, order, and discipline. To quote *Le Grand Vocabulaire Français* … art was defined as a "method for executing a thing well according to certain rules." … In this scheme of things, art was a rule-giving or legislative activity.

In short, guild management's social context valued conformance to rules and solidarity. Today we admire those who rise to new levels of excellence. Individual excellence existed in producing goods for royalty, but the "custom of the trade" defined excellence for most artisans. That sense of solidarity significantly influenced the principles of regulations, standards, and investments in human capital that are the focus of the body of this paper.

Regulation

Scholarly studies of craft guilds consistently stress the importance of regulation (Renard, 1918; Root, 1991). The volume and detail of guild regulations have so impressed some historians that they describe guilds as committed to the "perfection of craft" and to being the "better business bureaux" of their times (Sewell, 1986; Root, 1991). However, to understand the principle of regulation, we must examine the rationale and content of guild statutes.

The rationale of regulation

Consistent with the fundamental purpose of securing a reasonable living, guild regulations originated with impeding goods produced by outsiders (Renard, 1918; Unwin, 1963; Thrupp, 1963). From that origin, regulations expanded to preventing the growth of any one artisan's business at the expense of others in the guild (Black, 1984; Zacour, 1976). This end was accomplished by "keeping production and selling conditions for all members as equal as possible" (Kieser, 1989). Specifically, guilds regulated against such disruptive practices as: monopolizing access to raw materials, employing a large workforce, lowering prices, and using cheap raw materials.

The content of guild regulations

An example of guild regulation is the set of statutes written in 1325 for the weaver's guild of Toulouse, France. The statutes devote almost two-thirds of their content to what historians call quality control, but what experts in operations management call product and process standardization (Table I). Statutes dealing with quality are focused on dishonesty and describe quality in

Subject	Number of statutes	Percentage
Commercial issues	13	38.0
Quality control	13	38.0
Materials	4	12.0
Product attributes	2	6.0
Production process	2	6.0
Total		100.0

(1) *Commercial issues* – "no wool establishment (shall) receive or accept from any man or woman wool to be spun except from a single person only, nor (until wool) previously received (has been) returned lawfully spun" (Statute III)

(2) *Quality control* – "let there be chosen six good and suitable men, namely two finishers of Toulouse, and another two weavers, and another two dyers who for the whole year are to be guards, porters and rulers over all the ministry of woolen clothes of Toulouse" (Statute XXXV)

(3) *Materials* – "each man or woman (should) not mix wool from the slaughterhouse or the tanner's vats with other fine wools" (Statute VI)

(4) *Product attributes* – "no man or woman should weave other than well and lawfully and faithfully any cloth" (Statute XIV)

(5) *Production process* – "no man (should) card any cloth with iron cards with the sole exception of rough cloths which can be brushed with such cards" (Statute XXI)

Source: *Early Gild Records of Toulouse,* "*Statutum Paratorum, Textorum, et Tinctureriorum* (Statutes of Finishers, Weavers, and Dyers") (Mullholland, 1941). The statutes were published in medieval Latin from a rough and defaced text copied by a fourteenth-century scribe

Table I.
Summary of guild regulations

only general and subjective terms. The majority of measurable specifications concern defective and unacceptable goods. For example:

- let no finishers dare prepare cloth that is not "correct in length and breadth, or not well woven" (Statute XX);
- no one should receive cloth that is "haphazardly finished" (XXIX); and
- (levelling a two denari fine for) "poorly tinted and tightly-stretched cloths and those poorly woven and poorly wrought and otherwise disfigured" (XXXIV) (Mullholland, 1941).

The only regulations with a somewhat positive tone prescribe weaving "well and lawfully and faithfully" (Statute XIV) and weaving all pieces "to the convenience of the lords for whom they were woven" (XVI).

Thresholds of honesty

Guild regulations defined a threshold of honest production that would justify a fair price (Hickson and Thompson, 1991). The enforcement of such thresholds protected guild members from unscrupulous people who would undercut the market and undermine public confidence (Lunt, 1956; Pounds, 1974).

A common form of cheating in all ages has been material adulteration. Doping plaster with sand, for example, led to many fallen ceilings that damaged the reputation of all in the plasterer's guild. In response, the regulations of French plasterers in the 1200s state that the plasterer must "swear by the saints that he will put nothing except lime in the plaster and that he will deliver a true and honest measure". Plasterers who cheated were first fined and if "(he) habitually cheats and will not mend his ways, the (King's agent) can deprive him of his craftsman's status" (Gimpel, 1983).

In what way does the principle of regulation retain relevance for modern managers? The next section addresses that question by first discussing how the principle has endured and been a focus for continual improvement. The section then outlines the ways in which our ancestors' perspective remains with us both in negative ways such as a fixation with blame and in positive ways such as appreciating customer thinking.

Relevance to modern management

Guild regulations were an important step in the evolution of our modern system of public laws and watchdog agencies. While a lesson of history is that regulations primarily limit cheating, the guilds teach us that their enforcement also promotes the survival of honest producers. History argues that some form of regulation against exploitative businesses like that of currency devaluation is necessary and the implementation of regulation has continued to evolve from the day of the guilds to now (Spooner, 1972).

Our ancestors also found that guild enforcement encouraged charges that their regulations protected guild monopolies and outdated methods rather than safeguarding consumers. Society's response was to encourage independent

definition and enforcement by government agencies. This movement freed artisans from the bickering disputes that characterized guild courts (Poni, 1989). However, new tensions introduced in this movement to government remain the focus for continual evolution (Nchia, 1990).

It is sometimes said that a weakness of western thinking is its fixation with defects and blame fixing. This study of guild management discloses that concern about knowingly producing defective goods was a part of our ancestors' daily life. "Coin clipping", for example, became a task for rooms of people employed in taking tiny clippings off precious coins (Spooner, 1972). Understandably, society was concerned about undermining the value of its currency. Therefore, innovative inspection systems were those devised to tracking down and punishing coin clippers.

While a fixation with blame may be an unhealthy residue of guild regulation, there have also been positive impacts on modern thought such as appreciating the customer's perspective on products and their use. The first guild regulations impeded access to goods produced outside the guild. However, our ancestors soon learned that dishonest production might not be apparent to customers. Unprincipled armorers, for example, felt that what a buyer could not see would not hurt their horses. Therefore, the Armourers' Company of London in 1322 prohibited the use of old rags and defective material inside armored padding for horses (de Beer, 1991). In short, our ancestors learned to see their products through the eyes of users.

Regulation has been a useful principle of management. However, its primary use was constraining cheating and defective production. A broader understanding of guild management requires an examination of principles that respect human talent rather than simply constrain it. The next section discusses the principle of standards of accomplishment and its use in promoting competence.

Standards of respectable production

Reliable work was sure to win respect in times when, for example, an unknowingly defective saddle cinch could cause an accident. Guilds needed a system for judging products that were good and true and workers that were competent. Although guilds did not invent the principle of standard setting (Sullivan, 1983), it was basic to their operation. Guilds used the standard of "consistent production to the custom of the trade" in apprenticeships and in employing capable journeymen and capability to produce a "masterpiece" was an essential qualification for acceptance as a master artisan.

Subjectively referenced standards

Our modern perspective on quality would lead us to expect that legendary guilds would be concerned with the comparative excellence of work. We would expect to find:

- tailors publicly commending masters for the evenness of stitches;

- weavers comparing tightness of a weave; and
- carpenters proclaiming the smoothness of finish.

Studies of the guilds, however, disclose few expressions either of comparative excellence or of detailed measurement (Reddy, 1984). Instead, "the proficiency of the worker and the qualities of the work were relatively indistinguishable" (Sonenscher, 1987). Expressions about worker proficiency were general and subjective and rarely stated in detail. In France, for example, *vrais artistes* (true artists) and *gens de bras* (manual laborers) described proficient colleagues as opposed to incompetents.

The issue is not one of having the technology to make detailed specifications or of appreciating their value. Until the arrival of the middle class and bourgeois fashion in the nineteenth century (Walton, 1992), the dominant market for artisan-made goods demanded reliable functionality. Clothes and shoes should protect one's body; bread and meat should be nourishing and edible; muskets should fire; and glass panes not rattle. The heights of quality, embellishment of goods with precious materials, were reserved for the élite few, such as royal households (Doddwell, 1961).

The guilds used available metrology to define the standards needed for the markets they served. Within the bounds of commonly available technology and mass market expectation, goods produced to the custom of the trade were basically identical (Kieser, 1989). More detailed specifications emerged when required, but consistent with the philosophy of artisan solidarity, these were broadly achievable and endured for extensive time periods. An example illustrates knowledge of both appearance and performance specifications and concerns the clock that would qualify an artisan for the rank of master in the influential guild of clockmakers in Augsburg, Germany. From 1577 to 1732, each candidate was required to produce a basically identical clock described as follows:

> … a clock about seven or eight inches high that was capable of … hour and quarter-hour striking; alarm; an astrolabe dial showing the position of the fixed stars of the zodiac; an automatic indicator of length of day and night; a calendar dial; and indications adjustable for 12 or 24 hour cycles (Mayr, 1980).

In what way does the principle of standards of accomplishment retain relevance for modern managers? The next section addresses that question by first discussing how the principle has evolved into our modern system for industrial standards. On the positive side, the section notes the positive contribution of guild thinking to the use of performance standards. However, the section also comments on a continuity from guild days in the use of standards to impede new innovations.

Modern relevance of subjective standards

As in the day of the guilds, conformance to standards remains fundamental to reliable commerce. Learning from guild mistakes, we have placed oversight in voluntary organizations like the American National Standards Institute (ANSI)

that are independent from both producers and users (Sullivan, 1983). Advances in metrology have also allowed us to define descriptive standards such as physical dimensions in much finer detail than our ancestors. However, as in the guilds, we find it valuable to use performance standards that define what a product delivers for its users.

While the subjective standard of the "custom of the trade" was valuable, history also discloses its weaknesses (Coornaert, 1941). Principal among these weaknesses is the reputation for resistance to innovation that the guilds developed (Thrupp, 1963). Long expressed charges of favoritism and unfair restriction of trade became serious once demand emerged for military goods for continental scaled armies and for export goods that could compete in international markets. Political pressure for innovation led first to new institutions like royal corporations and merchant organized production. By the end of the nineteenth century, however, all western nations had legislatively banned their guilds (Renard, 1918).

Use of independent organizations and modern metrology permit standards of sufficient detail for mass production. However, the problem of inherent conservatism remains because the clearest and most rigorous way to define a standard is to base it on already established technology. Proponents of radical new technologies continue to charge that standards and standard-setting committees of groups like ANSI impede new technology (Krislov, 1997). Society is now experimenting with due process systems enforced by government purchasing power as a way to alleviate conservatism in standard setting.

In summary, a line of evolution from the guilds exists in which people of good will recognize both advantages and limitations in the principle of standards of accomplishment. As the limitations are basically human, we turn our attention to the principle of apprenticeship; that is, to a principle that develops both people's capacity for competent work and their pride in devoting their work to society's welfare.

Apprenticeships in competence and pride

It is common for interpretations of management histories to list apprenticeship as one of the guilds' greatest contributions (Juran, 1995) to management as well as a force behind the comparative strength of countries such as Germany (Fukuyama, 1995). Apprenticeship attained this status because it fosters both an understanding of how to work and the arduous practice needed to develop novices into both competent workers and proud members of respected trade groups.

Behavioral modeling

Apprentice contracts and statutes provide little insight into the content and developmental process of apprenticeship (Pannabecker, 1989). This lack of detail is understandable, given the absence of a precise and uniform language to describe work and the desire of guilds to keep their methods a mystery (Koepp, 1986). Outside the traditional idea of an apprentice practicing what a master

demonstrates, we are left concluding that masters taught whatever they deemed relevant in whatever way they chose. Another way to put it is that what masters taught was their personal property and was not open for examination or critique (Epstein, 1991).

Works on modern apprenticeships agree on a basic emphasis on learning through observation and practice (Hamilton and Hamilton, 1992). To be accepted as an accomplished artisan, apprentices are expected to internalize a process of work by watching a master artisan and repeatedly producing the same simple or partial piece of work exactly as the master does. When the master judges simple pieces satisfactory, the apprentice is advanced to more difficult and complete items.

On the surface, the combination of behavioral modeling and repetitive practice pioneered by the guilds appears simple. However, modern studies suggest that systematic and reflective repetition produces a complex but also tacit body of knowledge commonly summed up as know-how (Schön, 1995). Studies of companies successful in modern technology stress the importance of know-how that only those who repeatedly use a technology can feel (Leonard-Barton, 1995). The guilds could and did not analyze the development of know-how, but they could recognize it as a chief reason for their personal pride and group solidarity (Hudson and Hunter, 1981).

In what way does the principle of apprenticeship retain relevance for modern managers? The next section addresses that question by first discussing how the principle has endured in training programs based on using an organization's subject-matter experts (Dumas and Wile, 1992). The section also discusses the negative consequences residues that ensued because a significant number of guild masters perverted apprenticeship into a form of slavery to their self-interest.

Modern relevance of apprenticeship

The value that guilds placed on apprenticeship remains valid in modern industry throughout the world (Gospel, 1991). Even where social forces have impeded the institutional side of apprenticeship, as for example in the USA, the guild's basic idea of expert-based, on-the-job training remains vital. Whether in the guise of mentors, coaches, or subject-matter experts training, experts are increasingly being studied and used to accelerate the development of novices into productive employees (Scandura, 1996).

Despite their effectiveness, guild apprenticeships were not always ideal. For example, some have charged that guilds were, at best, powerless in responding to the physical abuse and narrow-mindedness practiced by many masters (Lequin, 1986). Another criticism was that, rather than help workers understand why and how their practices worked, many masters simply insisted on imitation. Public criticism that apprentices' inability to think for themselves impeded their ability to adapt to new conditions and technologies fueled public support for technical schools as replacements to apprenticeship (More, 1980). Apprenticeship and its modern derivatives remain biased towards

conservatism when self-interest intervenes in the practice of an otherwise admirable principle. The managerial principles and experience of the guilds have much to teach us today. However, their history suggests that no principle or institution is a replacement for the self-sacrificing dedication of managers to use their experience in the service of others.

Conclusion

The goals of the paper were to:

- define what excellence meant to the guilds;
- describe the managerial principles the guilds used to assure such excellence; and
- determine the relevance of those principles to industry today.

In what did artisans of old take justifiable pride? The answer is in honest goods produced to the custom of their craft. How was that achievement managed? Through a social organization, the guild, that discouraged dishonesty, defined a broadly realizable standard of acceptability, and trained people in basic skills.

This paper proposes that today's managers continue to use and improve on the managerial principles pioneered by the guilds. Institutional improvements made after the guilds have sought to realize past values more fully in a world of larger scale, greater complexity, and more global competition in technology. This goal has been accomplished by developing professional organizations that could use science and technology not available to our ancestors to develop and enforce regulations, standards, and theory-based curricula. Such efforts have been valuable improvements on the practice of our ancestors.

Society has been less successful when it has dismissed guild practice as inherently biased toward self-interest and against innovation. Independent and theory-based regulations, standards, and education are valuable – however, the problems of self-interest and conservatism remain. Those who have dismissed the guilds have also minimized the importance of experience-based knowledge. Fortunately, these forces are balanced by a growing recognition of the need to honor and rely on those who have mastered the arts of making our technologies and organizations work (Davenport and Prusak, 1998).

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