Repositioning Craft Education and Training to Re-connect Artisans to Designers

GERARD LYNCH

This article, based on the College of Fellows lecture, that the author gave at APT’s 2012 annual conference in Charleston, South Carolina, looks at the importance of crafts training to historic preservation.

Introduction
Reaching back to civilized antiquity, the building crafts have been repositories of a long and noble artistic and technical heritage. Apprenticeships fostered an intuitive regard for the intrinsic possibilities of materials and the development of the all-important “critical eye.” These apprentices eventually became master masons capable of controlling the design and erection of their buildings.

Over the last generation — through the misguided formal actions of professionals and bureaucrats working within construction and historic-building preservation yet outside the crafts and craft training and education — time-served apprenticeships have come to be seen as outdated, too long in delivery, and an expensive preparation for modern construction that typically demands only basic knowledge and “fixing” skills. This belief has systematically reduced the status of craftspeople to semi-skilled trades, robbing us of the traditional knowledge and crafting skills required to successfully erect or repair and restore traditionally constructed buildings.

How did such a paradigm shift occur within the crafts and contribute to society’s increasingly negative perception of their status? Also, how and why did a professional disconnection between designers and the master artisans become ubiquitous during the eighteenth century? This paper explores, from a British perspective, some of the complex historic, social, and political reasons why the building crafts have failed to regain control of their own destiny and to demand the breadth and quality of education and training that are required to embrace both modern construction and heritage needs. It also explores the writer’s pioneering involvement in direct action both to correct this situation and to facilitate meaningful reconnections on matters regarding assessment and specification between designers and the foremost artisans who are engaged on works to preserve, to the highest possible standards, our heritage of traditionally constructed buildings.

Historic Architecture and Craftsmanship
Historic architecture, whether strictly formal or vernacular in style, can be viewed as building expressed as art, the result of collective skills and knowledge of designers and various crafts engaged in its construction. Education and training in taste and judgment of a designer, combined with enlightened craftsman’s skills, contributes to the functional success and aesthetic appeal of a building. When there is an absence of quality design and craftsmanship, a building fails as a work of art.

Contemporary art is largely dominated by image over substance, where specialized knowledge and skill are dismissed as being marginalized, mechanical, and hindering creative thought and fail to recognize the disciplined learning that provided the essential foundation for the apparently spontaneous creativity of the leading historic craftsmen and artists, such as Fillipio Brunelleschi (1377-1446) and Michelangelo Buonarroti (1475-1564). Andrea Palladio (1508-1580), the leading Renaissance architect and author of I Quattro Libri dell’architettura (The Four Books of Architecture) published in Venice in 1570, actually spent several years working as a stonemason in the Pedemuro workshop in Vicenza, Italy. His combination of pragmatic appreciation of materials, construction process, and
overarching theories is very evident within his writings (Fig. 1).

A Noble Heritage

In England beginning in the twelfth century, and within a devoutly Christian society, witnessed a developing parliamentary system, the founding of universities, and the promotion of higher ideals of civilization — dignity, enlightenment, and beauty. The establishment of merchant guilds within mercantile towns or boroughs, by Royal Charter facilitated commerce through controlled distribution of their goods and wares. By the fourteenth century the success of the merchant guilds had awakened a desire for building artisans to form craft guilds to regulate and practice their crafts within a defined “area of search,” overseeing apprenticeships, quality of materials, and craftsmanship in all newly erected buildings.

The guilds’ highest aspirations produced superlative craftsmanship and masters heralded as articulate and inventive designers. It is important, however, to make the distinction between a master and a master craftsman. An apprentice served under a master, but that term only meant a teacher, as in schoolmaster. A master craftsman was a leading artisan recognized by his peers as possessing the highest level of skill, technical knowledge, and meaningful experience. Amongst masons he would also be a designer (magister cementarius) who got his hands dirty, drawing the building, deriving all the templates and templates, and setting out the building. The idea of an architect as a scholar-designer was not to arrive until the influence of the Italian Renaissance slowly began to spread after the fifteenth century.

An examination of incredible engineering solutions and artistic design in two of England’s most majestic medieval cathedrals, developed to solve structural problems caused by the massive weight of their towers at the vulnerable crossing between chancel and nave, reveals the pragmatic architectural skills and ingenuity of a master mason and a master carpenter — both now almost anonymous, because this was not the age of ego.

Wells Cathedral, Somerset. In 1329 William Joy was appointed master mason to Wells Cathedral, and in 1338 he confronted a major problem: the old tower appeared far too heavy for the piers, which were beginning to buckle. By 1340 Joy came up with an ingenious and final engineering solution to redistribute the weight by erecting unique inverted X-shaped “strainer arches” (alternatively termed “scissors braces”) of beautifully carved stone between the piers (Fig. 2). Today, after 673 years of working effectively, they mislead most people into believing they are a recent structural intervention.

Ely Cathedral, Cambridgeshire. A monk known as Alan of Walsingham (1316-1364) at Ely Cathedral, Cambridgeshire, who was renowned for his appreciation of principles of building mechanics and design, was appointed “sacristan” and put in sole charge of the fabric of Ely Cathedral in 1321. On the night of February 12, 1322, the great tower crashed straight down, destroying the choir and some attached portions of the structure.

Brother Alan decided to eliminate the original four piers by advancing them forward along two diagonal lines from pier to pier into each arm of the cross to redistribute the weight but now onto eight new massive columns, in pairs set equally apart, either side of the diagonal lines, at 45-degree angles. He asked William Hurley (1319-1354) master carpenter to the king, to design and create a central octagonal vault and lantern that would appear to be stonework but would actually be constructed of wood, a much lighter material. Hurley’s solution is considered one of the great engineering feats of the medieval period. Commencing 100 feet up, on top of the piers, using eight vertical oak...
posts, each 63 feet high and weighing 10 tons, Hurley erected a complex system of framing, braces, struts, and curved ribs united with a compression ring on top of the open vault that supports the tall lantern.

A New Age Begins

The long epoch of cathedral building was over by the fifteenth century, and the following Tudor period (1483-1603) heralded an age of brick, then a prestigious material used by the aristocracy and wealthy merchants for their palaces, castles, and country mansions; it was given royal approval when King Henry VIII (1491-1547) took possession of Hampton Court Palace near London in 1529 from Cardinal Wolsey (1473-1530) (Fig. 3). Wolsey had commenced construction in 1515 to the design of master mason John Lebons (dates unknown). Under Henry VIII a new program of works was designed by master mason Henry Redman (fl. 1495-1528), who had masterminded works at Westminster Abbey. Later, fellow masters John Moulton (d. 1547) and Christopher Dickinson (dates unknown) followed Redman as the palace doubled in size, using 26 million bricks over ten years. Inheritors of the same traditions as their medieval forefathers but working in stone and brick, the finest artisans cut, or “hewed,” post-fired, special low-fired bricks to produce enrichments of superb artistry, such as the riot of carved ornamental chimneys for which the period is justly famous (Fig. 4).

The reigns of Queen Elizabeth I (1558-1603) and King James I (1603-1625) witnessed a more sober style of architecture. In 1568, in recognition of the pre-eminence of brick over stone in London, Elizabeth granted a Royal Charter of incorporation to the Worshipful Company of Tylers and Bricklayers, allowing their standing alongside the older livery companies within the city and granting them as a guild the power to control all things within a 15-mile radius out from the old city walls (Westminster). Elizabethan and Jacobean architectural designs are largely the works of unheralded master craftsmen. Hardwick Hall (“More Glass Than Wall”) at Chesterfield in Derbyshire, built for Bess of Hardwick during the 1590s, is a mansion whose designer is known, one Robert Smythson (1535-1614), who, after 20 years of experience as a master mason, achieved the position of surveyor, or architect, as we understand the term today (Fig. 5). In the traditional manner, he left the detailing of articulation to Bess’s team of skilled craftsmen.

The Effects of the Renaissance

Medieval architecture had never been absorbed with wholesale enthusiasm within Italy, as Italians were continuously conscious of their ancient Roman heritage. The mid-fourteenth century saw Florence emerge as the center of the cultural rebirth, or Renaissance, of art and architecture, including building design, articulation, decoration, and use of materials from studies of classical sources of antiquity. The influence and effects of this northern Italian style spread slowly across Europe via the Low Countries and France. It appeared in England in some of the detailing of the finer Tudor and Jacobean houses in the late sixteenth and early seventeenth centuries, through the influence of foreign craftsmen, as well as pattern books utilized by masters keen to be up-to-date with this architectural movement. The result was building articulation with a more north European classicism rather than pure Italian.

It became obvious to discerning wealthy clients wishing to build in a truly classical manner not to rely solely on the theories and drawings of the Renaissance through an increasing plethora of publications but to visit Italy and study the buildings firsthand. The Duke of Northumberland sent artist and miniaturist John Shute there in the 1550s to gather material for his later publication, The First and Chief Grounds of Architecture (published upon his death in 1563). Although considered the earliest literary verification of researched classical architecture published in England, Shute’s writings largely paraphrase the architectural theory of the first-century Roman architect Vitruvius but accessed via a treatise published in 1544 by the French architect Guillaume Philandrier (1503-1563).
Pondering England’s first real architect, Inigo Jones (1573-1652), writer and architectural critic Sacheverell Sitwell (1897-1988) concluded that “The field was ready for Inigo Jones, the first true architect, to come.” Inigo Jones, after an extended time spent studying in Italy, became an exponent of a more rigid form of Palladian classicism by becoming fully conversant with Palladio, whose books he carried everywhere with him. This expertise, however, led him to a more dictatorial approach, of which Timothy Mowl asserts, “Once Jones had imposed the uncreative tyranny of ‘the correct form’ upon his hapless artisans, they would always be obliged to look nervously over their shoulders at the pattern books to see how Serlio, Vignola, Scamozzi or Freart had drawn a design.”

That may be so, yet Jones undoubtedly valued his leading masters for their intellectual and practical input. He worked with influential master brickmason and designer Peter Mills (1597-1670), who designed Thorpe Hall, Northamptonshire, (1653-1656) and was one of three surveyors appointed with Robert Hooke (1635-1703) and Edward Jerman (d. 1668), to organize the rebuilding of the city after the Great Fire of London (1666). In 1613 Jones travelled to the Netherlands to encourage Nicholas Stone the Elder (1586-1647), a leading master stonemason, sculptor, and designer in the Baroque manner, to return to England to take charge of building the Banqueting House (1619-1622) in Whitehall, London, the first truly classical building erected in England since the departure of the Romans around 412 AD.

Despite formally appointed architects and master craftsmen who were beginning to surrender control to them, both Stone and Mills were foremost among masters who designed and built structures. Because Stone and Mills flouted the conventions of true classical architecture, the architectural historian Sir John Summerson (1904-1992) labeled their style “Artisan Mannerist” and called them “artisan architects.” It is interesting to note that Stone was always referred to as a craftsman and never an artist, but the arts — or more correctly the “mechanical arts” — were then largely viewed as craft. Today a design is understood as an artisan’s drawing preceding its practical realization. In the mid-seventeenth century a design was deemed an illustrative rendering of an idea, but when based on a theoretical or scientific foundation, art was elevated to science. Joseph Moxon (1627-1691), in his series *Mechanik Exercises* (1678-1703), was writing about the main building crafts in London at a time when guilds were less powerful, yet still retained a tenuous control of the crafts and craftsmen. Significantly, he refers to their “art,” rather than “craft.”

Following exile in Europe during the Commonwealth (1649-1660), the aristocracy and the Royal Court under King Charles II (1660-1685) returned to England and heralded a golden period of architecture under the Stuarts. Craftsmen became more conversant with the classical rules of ratio and proportion, and they developed finer skills in the execution in detailing. Where deficiencies were identified, craftsmen were brought from abroad, or journeymen were encouraged to study by working in Europe. The father of Nicholas Stone Junior (1618-1647), for example, sent him to Rome to study under the classical artist, sculptor, and Baroque architect Gianlorenzo Bernini (1598-1680).

The problem of adapting the foreign classical buildings promoted by Inigo Jones to suit an English climate that required, for example, steep roofs and vast chimneys resulted in a blending of styles from the Netherlands with the designs and materials used by English architects and master masons into an Anglo-Dutch style of architecture that retained much of the richness, dignity, and repose of classical proportions. New heights of craftsmanship displaying sublime levels of artistic expression became established, and many British craftsmen coming out of these traditions emigrated to the new colonies of North America, influencing architectural styles, use of materials, and craftsmanship there. It was a tradition in which master craftsmen remained highly regarded by foremost architects, like Sir Christopher Wren (1632-1723), Sir Hugh May (1621-1684), and Sir Roger Pratt (1620-1685). These master craftsmen, such as master brickmasons Maurice Emmett (1646-1694) and Edward Helder (d. 1683), were valued for their pragmatic understanding, invaluable material and technical knowledge, and highly-skilled, artistic input (Figs. 6 and 7).
The eighteenth century witnessed the rise of socially elevated professional architects, many of whom went on the Grand Tour, studying the edifices of ancient Greece and Rome alongside the writings of Vitruvius, Palladio, Scamozzi, Serlio, and others. The effects were to be seen in America, too, with gentleman architects such as Thomas Jefferson (1743-1826) and the country’s first formally trained civil engineer and neo-classical architect Benjamin Henry Latrobe (1764-1820), who had been born in England and toured these ancient sites in 1784. Architecture had moved to mind and intellect, whereas it had once resided in the concrete realm of craftsmanship and materials, as formerly practiced by the masters. By the nineteenth century, under the auspices of the Royal Institute of British Architects (RIBA), founded in 1834, formal training had become defined as seven years of articled pupillage; successful completion granted the legal right to be titled “architect” and bear the initials RIBA after one’s name.

These gentlemen architects, armed with a formal education in the history, theory, and geometric proportions of classical styles, demanded purity of form through the slavish following of their designed details, far removed from the practical roots of the original Greek arkhitekton (“builder-in-chief, director of works”) and the Latin architectus (“master builder/carpenter”). The subordination of artisans to their overall control resulted in the gradual disconnection of craftsmen’s implicit guiding traditions, artistic judgement, and common sense implicit within their historic freedom.

An expanding British Empire with greater political, social, and mercantile control over society demanded huge domestic and industrial building programs alongside large-scale civil and military engineering. The nineteenth century brought huge changes and challenges to the crafts as a result of the increasingly mechanized production of building materials and new, easier-to-use alternatives. First the canals, then the railways, had brought not only new constructional demands but also quicker, more efficient, and relatively cheaper nationwide methods of transport that severely impacted the use of regional materials, vernacular styles, and craft practices. In matters of design and specification, the architect and structural engineer reigned supreme. This dynamic condemned increasing numbers of craftsmen to a restricted, monotonous work routine where intellectual input was minimally required, and artistry became stifled. As craft became viewed as trade, designers no longer saw the need to liaise with them within the design and specification process.

A Revival of Craftsmanship

The Great Exhibition of Arts and Industries, held in London at the monumental Crystal Palace in Hyde Park in 1851, proclaimed the wonders of products from this new industrial, mechanized age. Ironically, it also gave public prominence to the works of the leading craftsmen connected to the Gothic Revival, which had originated during the 1740s but was revitalized and led by Augustus Welby Pugin (1812-1852). Linked to the Oxford Movement, the reinvigorated Gothic Revival arose from an 1833 sermon in Oxford by John Keble, who declared a need to re-examine the roots of the religious break with Rome and apostolic traditions of the Church of England (Fig. 8).

By the mid-nineteenth century this view had permeated undergraduate life with a distinctly spiritual flavor and saw William Morris (1834-1896) allied to a number of like-minded Anglo-Catholics, particularly his good friend Edward Burne-Jones (1833-1898). In 1855 both men were introduced to the works of John Ruskin (1819-1900), himself influenced by some of Pugin’s ideas, leading to an interest in Pre-Raphaelite art and medieval buildings.

Returning from a study of the Gothic architecture of northern France, Morris and Burne-Jones resolved to pursue their aims not through Holy Orders but through art and architecture. This led to William Morris’s leading of the Arts and Crafts Movement in the 1860s, enlarging the Gothic Revival to embrace the medieval ethos. A primary aim was to seek a return to the virtues of freely expressed craftsmanship that, they held, were being destroyed by soulless, mechanized mass-production and the economics of industrialized capitalism.

In 1884 the Art Worker’s Guild was founded, with Morris an early president.
extolling the nobility of craftsmanship and demanding that a craft worker be regarded as a personal maker rather than a machine and given recognition as an artist. Possibly because of his past association with the firm of Morris, Marshall, Faulkner & Co. (1861-1875), which produced furnishings and other decorative arts, the guild’s emphasis on craftsmanship in textiles, furniture, and ornamental works in silver and gold, and more. Regrettably, the movement failed to truly champion the artistry of equally skilled master artisans within the building sector.

The Arts and Crafts Movement, however, was a vital and timely stimulus that reinvigorated craftsmanship within the building crafts. It is an irony, however, that because it was an architect-led revival, the educated eye can deduce the architect’s directing hand, rather than the guiding traditions and innate artistic techniques of the craftsman of the medieval period the movement sought to emulate. One must not ignore here the later architectural revivals arising out of the “Battle of the Styles” that followed the Gothic Revival, such as the William and Mary and the Queen Anne styles, which during the last quarter of the nineteenth century elevated quality appetites, rumbled to deliver. A depressed economy and accompanying demise of the various fashionable architectural genres, as a glorious celebration of consummate craftsmanship, for which the period is now justly admired.

It took the seismic shift within British society following World War I (1914-1918) and the Great Depression (1929-1931) to halt what Pugin, Ruskin, Morris, and others had worked so tirelessly to rediscover, establish, and promote what the CGLI had strived so valiantly to deliver. A depressed economy and accompanying demise of the great houses of the wealthy, the main financiers of the finest craftsmanship, were bad enough. Worse was the vast numbers of irreplaceable British men who had died in the squalid battlefields of the Somme, Passchendaele, and Ypres and further afield in Gallipoli were left physically and mentally disabled and unable to contribute as before. Of over six million enlisted men, a staggering 35.8% were casualties, with 886,939 killed, 1,663,435 wounded, and 191,652 listed as missing. The nation’s finest craftsmen, in the full vigor of their capability and optimism, were denied the opportunity to display the fruits of their highly skilled hands to the benefit of their craft and a nation that had invested so much in their apprenticeships. This era marked the beginning of the end of a type artisan so well taught they could turn their hand to all forms of highly skilled work and “work to demand,” or take on the most complicated commissions without specialist training.

**Post-World War II through the Early Twenty-first Century (1945-2013)**

World War I had been economically crippling to the United Kingdom, and its impact was compounded by World War II (1939-1945) and an aftermath that saw a pressing need to re-build bombed-out towns and cities; the emphasis was on economy of material with speedily erected buildings using construction techniques developed for military purposes during the war. This type of construction required only semiskilled labor, recruited from men demobilized (“demobbed”) from their military occupations, who had attended short training courses in the building trades. For some time after World War II the effects of these changes within the construction industry were ignored both within the CGLI craft syllabi and by working-class society that continued to place great value on school leavers fortunate to enter indentured apprenticeships, which would be their passport to a career as a qualified craftsman and elevated social status.

The Industrial Training Act (1963) heralded change in apprenticeships, as the government regulated and rationalized — if more correctly “cheapened” — delivery of training through the establishment of the Construction Industry Training Board (CITB). Working to a different rationale, its training schemes primarily sought skills competence and was driven by members demanding a level of training solely for contemporary site needs. This approach was wholly opposite to the importance that CGLI had placed on providing an all-around education and skills training that led to qualifications and retained the overwhelming respect and support of industry and the public for the quality work produced. The following decades saw the building crafts powerless to prevent CGLI apprenticeships from being reduced by government dictate from five to three years and thus leading to a significant loss of all-important craft knowledge and skills, many of which
were the traditional expressions of the crafts.

Facing over three million unemployed in 1981, the Conservative government launched their New Training Initiative (NTI), which identified perceived training priorities. School leavers were to be offered work experience, whether employed or not, thereby discrediting a tenuous partnership between employers, who were frequently unable to supply suitable craft experience, and college, where the education and training was, incorrectly, viewed as divorced from the modern building-site needs.

The overall resultant mess essentially was that neither qualifications nor time-serving could confirm a craftperson’s competence.

One serious political error blighting the wholly innocent building crafts ever since was the erroneous perception that the crafts could be a vehicle for work placements for unmotivated school leavers possessing no interest in learning — in stark contrast to the traditionally recruited, well-motivated, and keen-to-learn apprentices — simply as a means to avoid the national unemployment register.

This was an ill-conceived ideology, wholly disrespectful to the crafts, yet pursued vigorously, even though it ultimately affected the overall quality of work and the public’s perception of the value of modern craft training. The highly respected quality of the academic content of the traditional apprenticeship became a casualty as well. Most now being targeted had clearly struggled and the rigorous educational standards of the CGLI, which remains absolutely necessary was increasingly put to bear on CGLI to accept and validate modular training, based on a series of separately assessed subject units, operating within a structure of increasingly advanced stages, termed Level 1, 2, and 3. Essentially the emphasis was not how long it would take to achieve competence, at what age, or where the skills were acquired. There was no set length of apprenticeship to become qualified: all that was necessary was to demonstrate competence within the required units.

In 1992, when I was Head of Trowel Trades at Bedford College, Bedford, England, I wrote a two-volume treatise on the history and practice of brickwork (Fig. 10). In it, I urged serious caution, stating, “Until proven, however, it would seem prudent to question and examine closely whether the product of a system not demanding a prescribed training period, minimum experience or adequate maturity — the cornerstones of our historical and traditional training methods — does produce the skills required of true craftsmen.”

Looking ahead, I warned that “Shortening the apprenticeship period, removing some areas of skill and theory from the curriculum to attempt to produce the multi-skilled workforce demanded by the market place, is seen by many as the way forward. Such an approach does not, however, address the question of how to train [bricklayers] to possess a wide range of knowledge and skills, equal to that which forty years ago would have been classed as no better than average.”

I concluded by stating that “It is by providing places for carefully selected apprentices, and by ensuring the right calibre of craftsmen, that we will be able to meet the many modern demands and be able to make use of traditional craft techniques.”

These concerns were later accepted as well founded within the Construction Skills Foresight Report published in 2003, which identified several serious issues, particularly the poor quality of craft recruits, a 40 percent drop-out rate, and an escalating, acute shortage of experienced craftsmen and women with the necessary high-level traditional skills needed to repair and restore historic buildings in what was increasingly termed the heritage sector. This study highlighted poor foresight and planning by those in charge of running craft training and their lack of any meaningful understanding of the ever-present need for “holistic” craftsmen and women who are capable of working...
Table 1. Heritage special apprenticeship program for brickwork

<table>
<thead>
<tr>
<th>Number</th>
<th>Content</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>Control and philosophies</td>
<td>1</td>
</tr>
<tr>
<td>Module 2</td>
<td>Historic and contemporary bricks and brickmaking</td>
<td>3</td>
</tr>
<tr>
<td>Module 3</td>
<td>Historic bricklaying and brickwork</td>
<td>2</td>
</tr>
<tr>
<td>Module 4</td>
<td>Limes, lime-based mortars, and historic binders</td>
<td>2</td>
</tr>
<tr>
<td>Module 5</td>
<td>General causes of failure of historic bricks and brickwork and appropriate remedial actions</td>
<td>5</td>
</tr>
<tr>
<td>Module 6</td>
<td>Historical forms of jointing and pointing</td>
<td>4</td>
</tr>
<tr>
<td>Module 7</td>
<td>Repointing of historic brickwork</td>
<td>3</td>
</tr>
<tr>
<td>Module 8</td>
<td>Post-fired “cut and rubbed” and gauged brickwork</td>
<td>5</td>
</tr>
<tr>
<td>Module 9</td>
<td>Repairing post-fired “cut and rubbed” and gauged brickwork</td>
<td>5</td>
</tr>
<tr>
<td>Total number of days</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

Trying to Resolve the Problem

The acute shortage of traditional skills and possible solutions embraces social, economic, academic, and philosophical issues, as well as the more obvious craft concerns. After much lobbying by myself and several of the nation’s leading masters from other crafts, as well as increasing concern from various heritage bodies, the National Heritage Training Group (NHTG) was established. This body, with the support of English Heritage and Construction-Skills, is advancing a suite of heritage skills for delivery as an NVQ in England and Wales and as an SNVQ in Scotland Level 3 across all the main building crafts in Great Britain. These have optional units that cover all craft areas and thereby provide a qualification route not just for individuals working solely in the heritage sector but also for those working on both modern and traditional construction projects. The introduction of Construction Skills Certification Scheme (CSCS) cards to formally record one’s craft-training achievements and other associated qualifications is welcome. Achievement of a Heritage Skills NVQ results in a Heritage-endorsed CSCS card with Conservation Credits, providing stakeholders concerned with the care of historic buildings a means to ensure that only appropriately qualified craftsmen gain access to work on site.

In 2010, the writer, working within his craft and the existing modular framework of an NVQ, was commissioned by NHTG/ConstructionSkills to identify the main traditional craft areas and design the syllabus for NVQ Level 3, “Heritage Brickwork,” under the umbrella title of the Specialist Apprenticeship Programme (SAP). This was duly completed, industry reviewed, and approved. The agreed-upon subject areas delivered within interrelated modules of 30 days’ duration in six-week-long blocks over a six-month period for heritage brickwork are given in Table 1.

As its designer, the writer was tasked to deliver the pilot scheme of “Heritage brickwork in order to assess the effectiveness of the course content and method of delivery. This pilot was undertaken with five mature bricklayers at his own training center, where educational, as well as skill elements, were delivered, alongside a variety of associated targeted site visits; the program was linked to internal and external assessments and on-site testing of the depth of knowledge and high-level skills gained. The pilot, completed in March 2011, was deemed a resounding success by all parties, and several more courses have been successfully completed. There is a waiting list for future admissions. Its success is lies in the content and delivery, which emphasizes quality academic education alongside excellence in craft training that stimulates and also fosters an enquiring, creative mindset.

In recognizing that greater access to higher education was vitally important to the nation’s future, the last Labour government largely emphasized a huge increase in access to university places from a historic level of 15 to 50 percent of all school leavers. Yet it is widely recognized that many degrees offered are not providing the academic knowledge and skills the country really needs to successfully compete industrially. The writer has long argued that the emphasis should have been to settle for a target increase to 30 percent for universities and then to steer the other potential 20 percent of those who possess sound academic credentials but are better suited to working within the various crafts. The funding no longer required for university places could be transferred to the colleges to properly finance what is required to widen and raise the academic and skill levels being taught for the building crafts up to the degree level where it should be.

An American Perspective

The difficulties of overcoming the latter problem is a key part of the excellent educational and skill training being offered and achieved at the American College of the Building Arts, (ACBA) in South Carolina, www.buildingarts.college.us, under its dean, Simeon Warren. The institution ensures parallel academic studies with the many four-year liberal-arts preservation and building-design programs alongside the teaching of high-level craft skills. As Warren has explained, “The college’s overall curriculum is balanced between general education programs, the trades programs, and the experiential learning of internships for the present construction industry. These internships are designed to place students into work under highly skilled artisans to speed up the mechanical learning of skills that is not feasible within a collegiate environment thus ensuring knowledge and experience is passed to a new generation.”

Evidence from the college’s last accreditation site visit by National Association of Schools of Art and Design, which remarkably had no “recommendations” for improving the ACBA aca-
demic program, suggests that there is a clear gap in higher education for building artisans to gain a degree. The NASAD report stated that “ACBA’s curriculum, together with its mature and dedicated students, appears to be its greatest strength. The curriculum matches the unique mission of the institution and its...internships reinforce this synergy...Integration across courses, skill of faculty as teachers and artisans, and the intimate teaching and learning environment together provide a powerful learning experience.”

Warren contends that the academic community has let the construction industry down over the last 40 years. Students who wished to pursue craft to a higher qualification have had no clear pathway. He asserts that the only way now to advance craft-based ascendancy is through the creation of degree programs that unite the crafts and liberal arts. This view is supported by hearing visiting academics continually indicate a respect for ACBA accomplishment, many inferring a wish for their own programs to be able to achieve the synergy between academics and craft specialization. Warren also praises the flexible American academic licensing system, which allows the opportunity for visionary organizations to develop a new cutting-edge program (although he does not recommend anyone trying this nearly impossible objective). Through ACBA’s work it is clear that the rigorous nature of the building trades have a valid reason to be taught to bachelor’s-degree level.

America has a handful of degree programs, most notably David Mertz’s program at Belmont Technical College in Ohio and Steve Hartley’s Program at Savannah Technical College in Georgia, both of which emphasize traditional trade skills and have an encouraging network of new pathways for students to pursue. It is Warren’s hope that a formal connection between these individual programs can be achieved nationally and a clear alignment established with the major building industries, resulting in the development of industry-needed “educated artisans” for the twenty-first century.

After five graduations and nearing a student body 60 strong, ACBA’s reputation continues to gain strength and solidify a pathway for a new generation of students interested in the “historically contemporary craft of building.”

**Future Challenges**

The computer age has undoubtedly brought huge benefits to society, yet it has also created its fair share of problems. One problem significant to the viable future of the building crafts is the increasing loss of manual creativity. Through seriously misguided political desire, the United Kingdom is no longer a major manufacturing nation, and many workers spend time in an office with a mouse at a computer screen, instead of in a productive workshop with tools at the lathe or workbench. Even designers increasingly work solely within the format of computer-aided design (CAD), so that basic sketching and traditional drawing skills of working in scale, proportion, and perspective are largely ignored, let alone developed. Frequently, the manipulation of form and the choice and utilization of materials appear disconnected from pragmatism; they border on the mechanical, even fantastical, rather than being proportionally harmonious and tactile and combined into a skillful assembly of materials with a sensible appreciation of how all might weather; in essence, the technology of how materials and the overall building perform can often fail to be pragmatically matched to craft skills.

For contemporary architects the material and technical input they require for a new building emanates primarily from manufacturers’ data sheets and technical-support team, so input from the artisan is, regrettably, rarely sought. Whilst this might suffice on new construction, it is when working on the repair or restoration of historic buildings that the failure by designers to connect with those artisans who do possess sound traditional knowledge, skills, and meaningful experience can negatively affect the pragmatic approach to such works and the resulting quality.

For too long it has been deemed unnecessary to teach artisans working in modern building construction deeper knowledge of their materials and how to explore their artistic possibilities by developing the necessary crafting skills that foster individual initiative, resourcefulness, and creativity. Instead they are expected only to unpack and assemble materials, reducing their role to that of an on-site “fixer,” despite the glaringly obvious fact that most of these workers, at some point in their careers, will work on repairing, restoring, or adding sympathetic extensions to traditionally constructed buildings; this is an unforgivable exclusion of knowledge within their learning.

Some within the UK suggest there is no need to teach such traditional knowledge and skills because not all will work on such prestigious buildings as Hampton Court Palace or on the Victorian St. Pancras Railway Station and Hotel (1868-1873), which has recently been restored and extended. Yet, as the writer continues to maintain, within every hamlet, village, town, and city across the UK there are traditionally constructed historic buildings (well over five million are pre-1914). All demand that the thousands of artisans called to work on them be properly provided with the appropriate level of traditional craft knowledge and skills to ensure their approaches are harmonious with the original buildings.

Research clearly confirms the regard designers historically placed on the opinions of senior artisans, for they knew only too well that the success of a project was linked to their practical skills, knowledge, experience, and, most of all, their “critical eye” — their ability to quickly discern the positives and potential negatives within the practical realization of prospective designs and specifications. This should apply today in the world of historic-building preservation, where a senior artisan’s cognitive perspective, with an over-arching combination of practice, theory, technology, and history, can provide invaluable leadership.

Those who still resist these aspirations are largely unable to recognize or understand that the building crafts are, and always have been, capable of producing artisans entirely capable of the highest level of academic attainment and craftsmanship equal to, and frequently exceeding, the best from the fine arts, through its own selection process and well-structured apprenticeship programs; it is patronizingly disrespectful of others
outside the crafts to suggest otherwise. New heritage programs and initiatives discussed above are already providing secure futures for those availing themselves of such opportunities, as well as offering paths to become highly-skilled and proficient artisans. The writer has also been involved with excellent initiatives in the UK with The Prince’s Foundation (www.princes-foundation.org), the Society for the Protection of Ancient Buildings (www.spab.org.uk), and the Landmark Trust (www.landmarktrust.org.uk), among others that provide funding, opportunity, and support to enable apprentices to work alongside and learn from older, knowledgeable, highly-skilled, and experienced craftspeople, some of whom are the country’s peer-respected, leading practitioners. In so doing, modern handiwork will truly compliment and honor, physically and spiritually, the craftperson’s work with which it connects from centuries past.

Conclusion
Modern craftspeople have, for many, many years, been formally robbed of the liberty of being the authors of the design of their work and also forced to silently witness their crafts being systematically debased by those who should never have been granted the political authority or bureaucratic power to do so. Sadly, due to cumulative effects of the latter, the time is some way off when artisans can, once more, earn the confidence of the architect to permit a surrendering of full-size details to their expertise. Yet this does not mean that the crafts should concede the aspiration to rediscover and master those guiding traditions, because the reward for those enlightened artisans would be most beneficial and satisfying. The writer takes some satisfaction that the warnings he and other senior craftsmen within the UK, like master plasterer Jeff Orton (who, like the writer, has also taught at ACBA and Savannah Tech), have consistently voiced over the last 20 or so years about the great loss of traditional craft knowledge and skills, were eventually accepted as well founded, before it was too late and we were unable to practice our crafts and contribute to building conservation. We are the last of those from the old-fashioned linear apprenticeships, and our like will not be seen again.

Now our advice is respected and sought, returning to us a voice for our beloved crafts, so long denied, and allowing us to regain a certain degree of control to demand, advise, and practically participate — albeit within the modern system’s framework — on the delivery of the required breadth and depth of quality craft education and training for both contemporary construction and the vitally important heritage needs. Key to this is not only attracting good students, facilities, and access to the necessary range of tools and materials but also attracting educated, articulate, and inspiring craft tutors. Such initiatives will help to ensure that there is an ever-increasing number of knowledgeable and highly-skilled, holistic craftspeople capable of working with consummate ease and confidence on both modern and traditionally constructed buildings, who have been taught the subtlety of traditional crafting skills in order to develop the all-important critical eye. All of this will collectively engender a return to overall pride about working with one’s hands within the building crafts and serve to revive their former elevated status within contemporary society as a whole. If we within the crafts do not have pride in ourselves, we cannot expect it from those outside of them.
The writer has always believed that the key to quality education and training is through a three-strand approach that blends practice, theory, and technology with a historical underpinning to produce holistic artisans who can also confidently engage with designers. In this respect it is interesting to note the opinion of the late John Ashurst (1937-2008), an architect, consultant, educator, and author, who was a luminary within the building-conservation and the heritage sector. Referring to this approach by the writer, he observed:

The present era is one of almost unprecedented interest in the exploration of the past and the conservation, or restoration, or re-creation of its physical aspects; it is also an era characterized by fast-track learning and a consequent dilution of traditional professional craft training. In the race for training results and the sometimes false security of “accreditation” based on an accumulation of projects and attendances at seminars or workshops, the “ballast” of history and culture often has to go; or it is transferred to an academic programme where it will have no practical influence on the way in which historic townscapes are perceived and conserved.

The truth is that quality of work necessary to conserve historic fabric is dependent on a sound and comprehensive understanding of culture, technology and craft. When one of these three strands are disentwined there is a diminution of that quality, and conservation intervention degrades and confuses what should have been enhanced and made clear.

The writer’s long and proven experience in designing and delivering craft education and training embracing traditional knowledge and skills, primarily for use within the heritage sector, is of record, and confirms that this approach does ensure that those armed with higher levels of knowledge and skills are in greater demand and that the very best become leaders, who, within management-speak, are termed “knowledge workers.” This training will facilitate a meaningful reconnection and collaboration with senior designers and allow craftspersons to be viewed as associates rather than as subordinates. Thus, they can help pragmatically on matters of assessment, planning, and specification and on the precise nature and methodology in the hugely important work of preserving our traditionally-built heritage to the very highest of standards.

This goal can be achieved by the correct approach to delivering craft education and training to ensure that artisans gain a cultivated understanding of the roles of the architect, surveyor, engineer, and so forth, and that they appreciate the major contribution of various periods and styles of architecture to the arts of our nations. The designers, in turn, having worked with well-taught, articulate artisans who are proud of their crafts and having witnessed their superior palette of craft skills, knowledge, and erudite, technical observations will come to fully understand how they can be invaluable advisors on both the limitations and possibilities of materials and the techniques of process — for art is unworkable without its artisans (Figs. 11 through 13).

GERARD LYNCH is an internationally acclaimed historic brickwork consultant, master bricklayer, educator, and author. He followed a traditional apprenticeship as a bricklayer and gained many awards, including the Silver and Gold Trowels from the Brick Development Association, and is a Licentiate of the City and Guilds of London Institute (LCG). He returned to contracting and set up a private consultancy practice in 1992.

Notes
6. Ibid.

The APT Bulletin is published by the Association of Preservation Technology International, an interdisciplinary organization dedicated to the practical application of the principles and techniques necessary for the care and wise use of the built environment. A subscription to the Bulletin and free online access to past articles are member benefits. For more information, visit www.apti.org.