

The Utopian design policy of the Shakers

NIGEL CROSS

Design Discipline, The Open University, Milton Keynes, UK

This paper reviews some aspects of the nineteenth-century religious communitarian sect, the Shakers. It concentrates particularly on the environmental and other technical design aspects of the Shaker communities, setting these within the context of Shaker life and beliefs. Their design policy produced not just individual artefacts (such as the furniture for which the Shakers are particularly well known) but a total, Utopian environment which reflected and embodied their beliefs.

The Shakers were members of a communal religious sect that flourished in the USA in the nineteenth century. Led by a blacksmith's daughter, Ann Lee, from Manchester, England, they founded their first tiny community in 1776, at Niskeyuna, New York. 'Mother' Ann Lee believed that she was a female reincarnation of Christ, and the sect she founded was properly called the United Society of Believers in Christ's Second Appearing. Beginning as an offshoot of Quakerism, the Believers' bodily trembling during worship earned them the name of 'Shaking Quakers', and hence 'Shakers'.

About the end of the eighteenth century the United Society membership grew rapidly, largely as a result of gaining converts from the religious revivals of that time. By about 1850 the Society had grown to 6000 members, living in some 20 villages scattered from Maine to Kentucky. Each village contained up to half a dozen 'families' of some 60 or 70 men and women. Each 'family' was semi-autonomous, with its own fields, orchards, workshops, and large, communal house.

In these selfsufficient rural communes, the Shakers practised an enlightened, productive organic agriculture and horticulture, and manufactured a rich variety of craft products. They designed and made virtually everything that they themselves needed for their chosen way of life.

However, that way of life was a singular and uncompromising one. The Shakers saw themselves as the resurrected ones, and they isolated their communities from 'the world'. They practised the strictest celibacy; men and women were regarded and treated as each others' equals, but although they lived in close proximity the sexes led rather separate lives. Shakers submitted to the rule of their own Millennial Laws which described the minutest details of their daily lives, and to an omnipotent, self-perpetuating, governing 'ministry'.

Although it is now virtually extinct, Shakerism retains an interest for us today for what we can learn from its particular attitudes to technology and design. Through deliberate design policy (laid down in the Millennial Laws) the Shakers set out and successfully managed to

establish their communal vision of Utopia. Through creating a coherent set of artefacts, from tools to clothes to buildings, they created their own special environment that embodied and sustained their highly principled lifestyle. In contrast, members of almost all other communities, and certainly the members of mass society today, have to live in an environment which is not of their choosing, not of their design and not of their making.

This Utopian design policy and the successful design *process* of the Shakers may have been important contributing factors to their relative success as a communitarian experiment. Through their designing and making they constantly approached their aspiration to create a heaven on earth. Their vision of this heavenly earth was that it was clean, bright, crisp, healthy, orderly; perhaps the opposite of the hell-on-earth slums Mother Ann had experienced in Manchester. Other nineteenth century communitarians (and it was a time of such experiments, especially in America) tended either to regard the design of their environment as unimportant, or else to have preplanned Utopian designs which they sought to impose on themselves. However, the Shakers, says Hayden,¹ 'were acutely sensitive to the effects of the physical environment on the life of their communities', and through a continuing process of design they 'probed the perceptual questions which link social behaviour and environmental design.'

Today, in our industrialized environment it is being increasingly recognized that the 'neutrality' of the technological environment in which we live is a myth, and that therefore design is as much a process of social control as it is a process of technical change. In this paper I shall try to explore, through the historical, Utopian example of the Shakers, how technology and society interact in an idealized relationship, and how that interaction is both reflected in and influenced by design policy.

SHAKER LIFE

All Shaker communities adopted the basic Shaker style of government, organization and lifestyle. Each society was ruled by a 'ministry' of usually two Elders and two Elderesses. This ministry appointed an Elder and Elderess to each 'family' within the society, the 'deacons' and 'deaconesses' who ran the day-to-day business of a family, and the 'trustees' who handled its dealings with the world. The ministry also appointed its own successors.

Each communistic 'family' looked after its own temporal affairs, but long lists of rules and regulations covered virtually every aspect of a Believer's life. These were embodied in the Millennial Laws, which not only laid down the general principles of the organization of the Society, the duties of the elders, etc, but also such details as:

- Brethren and sisters may not shake hands together
- All are required to rise in the morning at the signal given for that purpose
- All should retire to rest in the fear of God, without any playing, or boisterous laughing, and lie straight
- No one should talk while eating
- When we kneel, all should kneel on their right knee first
- When we clasp our hands, our right hand thumbs and fingers should be above our left, as uniformity is comely

The Millennial Laws (numbering over 350) are a curious mixture of Shaker basic principles (such as 'Believers must not run in debt to the world'), sound practical rules (such as 'It is not allowable to redrill a hole in a rock while it is charged for blasting') and seeming petty nonsense (such as the injunction to 'lie straight' in bed). Many of the Laws appear to be incredibly restrictive and repressive, but they were, of course, self-imposed and quite voluntarily accepted by the Shakers. The Laws should perhaps be regarded as communally-adopted guidelines (in fact, they originated in the 'way-marks' of Father Joseph Meacham) for perfect,

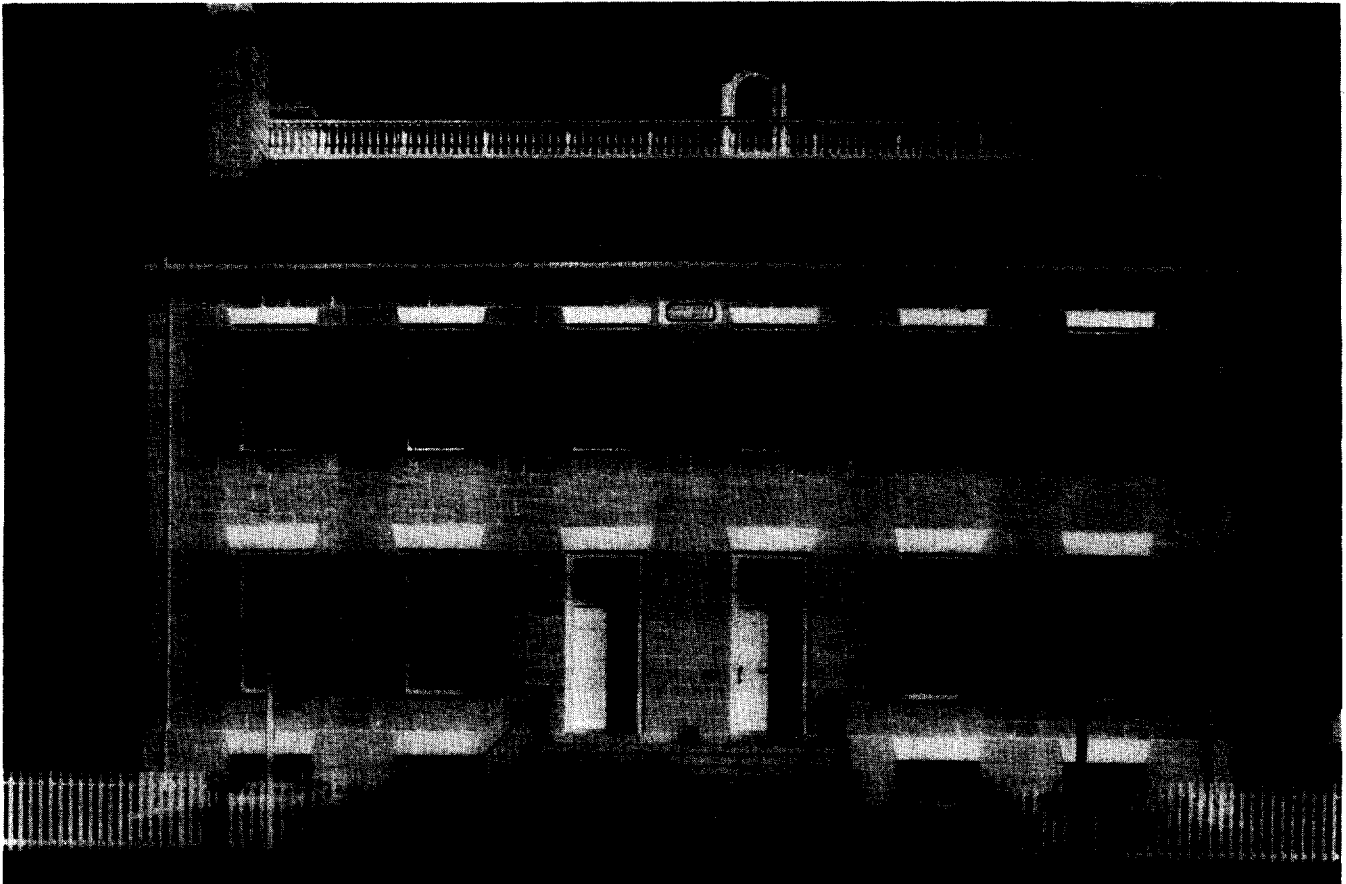


Figure 1. The communal house of the 'Centre Family' at Pleasant Hill, Kentucky. Separate entrance doors were provided for men and women

spiritually-inspired behaviour, rather than as more conventional laws which attempt to control antisocial behaviour or to impose dictates of a ruling class.

Although sharing a communal family home, and often sleeping in small dormitories only across a landing from one another, the sexes were carefully kept apart. Sexual equality was practised, but women did the 'women's work' of domestic chores, cooking, washing, etc. As well as the domestic work, which was conducted on a rota of usually one-month assignments to the kitchen, laundry, etc, the sisters undertook various industries such as spinning and weaving, fruit preserving, dairy work, and participated in the herb and seed businesses. Each brother had a trade he practised, but not to the total exclusion of all other kinds of work. There was, of communal necessity, a continual cooperation and sharing of tasks.

Everyone was required to undertake manual work of some kind. Besides the basic agricultural work which supported each family, there were many crafts and industries carried on to produce goods not only for the Shakers' own use but also for trading with the world. Within each family, the distribution of goods and produce from the common stores was effected with rigorous equality between all members.

The general daily life of the Shakers was regular, ordered, and peacefully industrious. In violent contrast were their weekly (or sometimes more frequent) religious meetings, which maintained the fervour and activity that had earned the Shakers their name. From the earliest, very anarchic assemblies, these meetings gradually became more ordered but were still notable for the ritualized dancing and marching, or 'labouring', in rows, with the Believers clapping and singing lively hymns. Often individuals would receive a 'gift' to speak in tongues or pass on messages from the spirit world, or receive the 'whirling gift'.

Several writers have suggested that these frenzied ceremonies provided a psychologically important release for

the Shakers from the great restraint they exercised in the rest of their lives. 'Shaker ceremonies served unparalleled expressive functions,' Kanter² points out. 'During the day Shakers tended to work in silence. Even meals were eaten quickly and silently . . . But then during the ritual, emotion, feeling, tension and physical energy literally exploded.'

On certain occasions there would be elaborate rituals with the Believers marching through their lands, wearing make-believe heavenly costumes, enjoying heavenly feasts, getting merry on spiritual wine, and conversing with the spirits of departed Believers, Indian chiefs, George Washington or Napoleon. Rexroth³ comments that 'Psychodrama is the only word we have for such activity because it is impossible to accept them as genuine hallucinations; and Shaker leaders often admitted to outsiders that they were really make-believe'.

SHAKER INDUSTRIES

The Shakers achieved great success in many of their craft industries — both in terms of the quality of their products and in business terms. These industries were based on the families' own communal requirements, in the main, but were also intended to produce a modest income. Profits were deliberately kept small, although their goods achieved high reputations and sold at relatively high prices. 'They catered . . . not to the frailties of human nature, but to the genuine needs of society; their goods were meant to serve some real use. The result was that the Shakers early achieved an enviable reputation for reliability and honesty, and the quality of their products was uniformly high.'¹⁴

Their religious faith and principles carried through into their industries. For instance, they held a progressive view of the roles of science and technology which can be attributed to their belief in their own superiority, as the resurrected. They regarded their religion as a practical faith,

combining 'science, religion and inspiration'. Wingate⁵ (quoted by Andrews⁴) was told by the New Lebanon Shakers that 'science and religion, "truly so called", are one and the same.' The Shakers' efficient progressiveness came to be admired within neighbouring communities of the world. Before buying new equipment, for example, local farmers would call on the Shakers to see what they were using.

Agriculture and horticulture

The Shakers became quite large landholders, through gifts of converts' properties and also by buying neighbouring farms. (They did not allow themselves to 'invest' their money in any other way.) The agricultural basis to their selfsufficient separation had a spiritual as well as a practical purpose. 'They consider their labour in the soil as a part of their ritual, looking upon the earth as a stained and degraded sphere, which they had been called to redeem from corruption and restore to God'. (Dixon,⁶ quoted by Andrews⁷.)

Only those crops which were found suited to the local soil and climate were cultivated, thus complying with the 'natural order'. There were also positive attitudes towards what we would now call conservation and recycling. Hayden,¹ drawing on the account of Wingate⁵ notes that 'rainwater was channeled into laundry tubs, kitchen waste was circulated to the orchards, and waste in earth closets used for compost heaps, all aspects of a sacred, closed system to redeem the land through intense, careful use'.

The Shakers were reputedly the first in the USA to market medicinal herbs. As with other industries, this also originated in their own requirements for selfsufficiency. Shakers did not consult the world's doctors, but had their own nursing sisters in their own hospital wards. They started selling herbs after about 1820, and it grew into a large industry, even becoming international – shipments were made to London as late as 1905.

Garden seeds were also a major Shaker industry. They were said to be the first seedspeople to package seeds in small envelopes (around 1816). They then invented machines for filling these seedbags, and went on to do their own printing of labels, for which they also invented hand-printing machines.

Furniture

Shaker furniture is renowned for its revolutionary functionalism, in contrast to the prevailing styles of the nineteenth century. In both furniture and architecture the Shakers preceded the functionalism of the twentieth century Modern Movement in design. They achieved this by adopting a vernacular, craft approach to the expression of their beliefs, aspirations and shared conscience.

Shaker design is distinguished by an elegant simplicity – perhaps the best interpretation of 'functionalism'. This simplicity, evident in all Shaker endeavours, they regarded as a gift of God – the 'gift to be simple' – and a constituent of their resurrected life:

'Tis a gift to be simple,
'Tis a gift to be free,
'Tis a gift to come down
Where you want to be,
And when you have come down
In your place just right,
It will be in the Garden
Of Love and Delight.'
(Shaker hymn)

'The Shaker artificer found that the simplest things, if made without error, were not only the most useful, but also the most satisfying to his conscience' (Andrews and Andrews⁸).

Chairmaking, in particular, became another large Shaker industry. In fact it was one of the earliest Shaker industries, and (once again) they were pioneers in this

occupation in America. Over the years, many thousands of Shaker chairs were sold through furniture dealers in the towns and big cities.

Andrews⁴ has described the general nature of the Shaker chair:

The prototype of the Shaker chair was the common slat-back which dated from early Colonial times. The strength and simplicity of this design appealed to the first cabinetmakers of the sect, under whose touch, however, the frequent crudities of those earlier chairs were refined and their utility greatly increased. A lightness was given to the frames without sacrificing strength, and their chrome yellow, red or natural finish gave them a charm which was heightened by the addition of woven seats in listing (webbing) of many colours. Because of the lightness and simple turnings of all members, even the first chairs made are readily recognizable as a Shaker product.

The chairs, and some other furniture such as beds, were often designed to anthropometric rules, and sometimes specifically to fit a Brother or Sister for whom they were particularly made. Some chairs (called 'tilting' chairs) were fitted with a Shaker invention of a ball and socket device in the base of the rear legs. The hemispherical ball, with its flat surface downwards, allowed the occupant to tilt and rock his chair without damaging the floor or fear of slipping.

Although Shaker furniture has its own distinctive style, it was all craftmade, and therefore each piece was individual. Andrews and Andrews⁸ suggest: 'It is hardly possible, for example, to find two sewing cabinets, or two treadle tables alike. There was freedom, within the limits of principle, to create new designs.'

It should be said, however, that Shaker furniture was not universally admired. Charles Dickens visited the Shaker Society at New Lebanon in 1842, and commented in his *American Notes*: 'Ranged against the wall were six or eight stiff, high-backed chairs, and they partook so strongly of the general grimness, that one would much rather have sat on the floor than incurred the smallest obligation to any of them.'

Other products

The Shakers had many other miscellaneous industries producing items both for their own use and for sale. For example, broom and brushmaking was widespread amongst Shaker families (the flat broom was a Shaker invention). There was also tanning, which in turn led to leatherwork industries, such as saddles, harness, etc, and boots and shoes – again often made to fit particular individuals. ('Our shoes are for comfort and made to the feet', boasts a Shaker poem.) Elegant oval boxes, made from thin maplewood shavings, were another Shaker product.

There were many, many other goods made by Shakers – indeed, almost everything that would be required by selfsufficient, selfisolated communities: from buckles to bricks, candles to clocks, pipes to pails, sieves to spinning wheels, wagons to wire nails.

SHAKER INVENTIVENESS

I have already mentioned a few examples of the originality Shakers brought to their industrial pursuits and domestic products. There is, in fact, a long list of claimed Shaker inventions and improvements. They have been credited with the following:

- the circular saw
- the common clothes pin
- cut nails
- an automatic spring
- a turbine water wheel
- a water wheel governor
- a screw propeller
- a rotary harrow
- a threshing machine



Figure 2. Entrance hall of the Centre Family house. Segregation of the sexes led to a strict design symmetry, including twin staircases. A Shaker custom was to hang chairs not in use from the pegboard featured throughout Shaker interiors

- a pipe machine
- a pea sheller
- a selfacting cheese press
- a butter worker
- a revolving oven
- a palm-leaf bonnet loom
- the Shaker wood stove
- metal pen-nibs
- the flat broom
- an improved windmill
- an improved washing machine
- machines for turning broom handles, sizing broomcorn brush, filling seed bags and herb packages, printing bags and labels, cutting leather, cutting and bending machine card teeth, twisting whip handles and lashes, silk reeling, splint making, basket making, box cutting, fertilizing, and planing boards

Shaker inventiveness ranged from the creation of significant new tools and machines to modest, but ingenious, domestic comforts such as the tilting device for chairs. Andrews⁴ comments that 'Seldom did the visitor fail to notice how farming and industrial operations were accelerated by all manner of skilful means and devices, how the labour of the household was lightened by labour-saving machinery fashioned in the Shaker shops, and how efficiently sanitary systems had been constructed.'

The Shakers were consistently technically progressive, frequently being the first in a region to introduce water power, for instance. Quoting Brother Isaac Youngs of New Lebanon, Andrews⁷ says that 'he writes about "a grindstone going by water", a new stone bridge, the introduction of cast-iron stoves to replace fireplaces, a trip hammer works, aqueducts to bring water into the kitchen,

"a proper framed wood-house", a cast-iron bark mill, the oiling of floors, alarm clocks, a new spinning jenny, improved types of lathes, drying kilns, and wood mills, even "exertions for improvement in our language and address".'

Neal⁹ says that 'often the Shaker craftsman took another man's invention and improved on it. For example, the Shaker washing machine that won an award at the Philadelphia Exposition in 1876 was copied and improved with the originator's consent'. She adds that 'inventiveness as a Shaker characteristics lasted throughout the years'. In *The Manifesto* for March 1891, the South Union correspondent wrote:

'One of our members, C. Holman, has invented a rotary machine and another member, Sandford Russell, has a steam propellor under way and nearly ready for use. A mania has seemed to take hold of some of the Brothers for inventing and being skilful mechanics, and they are successful.'

Why should the Shakers have been so enamoured of technical progress? A principal reason is that they saw themselves as superior to the world, and tended to assume that this should be reflected in their technical superiority. Father Joseph Meacham wrote: 'We are not called to be like the world, but to excel them in order, union and peace, and in good works . . .' The 'good works' should be 'works that are truly virtuous and useful to man, in this life', and, as always, 'superfluity' was to be shunned: 'We have a right to improve the inventions of man, so far as is useful and necessary, but not to vain glory, or anything superfluous.'

There were also some fairly practical reasons for the Shakers' pursuit of inventions and improvements. For instance, they were often engaged in activities that were not common elsewhere, and therefore needed to create and design the tools, etc for their own particular tasks. Also their general selfreliance and isolation from the world meant

that they were dependent on their own ingenuity for many items that others would seek in the market places.

However, these reasons do not seem satisfactorily to account for the Shakers' prolific ingenuity. They themselves believed that their inventions and designs were 'gifts'. White and Taylor,¹⁰ themselves Shaker Sisters, offer a typically spiritual justification for Shaker inventiveness: 'There is no quickener to brain and hand like a heart at peace, a conscience clear and a sense bright with the joy of holy living; and thus the world is richer for many tangible proofs of the Shaker's consecrated ingenuity.' Less spiritually inclined commentators might point out that the mixing of occupations that Shakers practised could result in the transfer of ideas from one task to another (as may have happened in the case of the circular saw as the transfer of the idea of the spinning wheel).

Andrews⁷ seems to suggest that Shaker inventiveness was natural 'Yankee ingenuity', which is presumably the birth right of such 'practical-minded Yankees'. Less chauvinistic commentators might point to the recognition of ability and initiative that was given to individuals within (and despite) the communal order of the Shakers. Their inventiveness has also been accredited to the natural benefits of communism, by Baker;¹¹ 'The list of their inventions is a standing refutation of the theory that Communism would reduce production to a dead level; it shows rather, that nothing so much stimulates the inventive genius of a group as a system which enables them to reap the benefits of their own talent, and to save their own labour by whatever labour-saving devices they introduce.' Less dogmatic commentators might now add that the Shaker cultivation of the concept of inspired 'gifts' would also have helped to promote an atmosphere in which individual creativity could flourish.

Although they were the most wide ranging in their practical endeavours, and the most widely renowned for the quality and good design of so many of their products, the Shakers were not, however, alone amongst nineteenth-century communitarians in their inventiveness. The Oneida Perfectionists particularly sought to be inventive, to demonstrate their superiority and uniqueness. Their inventions included a 'traveller's lunch bag', which was a kind of briefcase with built-in compartments for sandwiches, etc, a 'lazy Susan' dining table which had a revolving central section to save the necessity of passing dishes around, and the 'final shoe', a 'perfect' design. These may sound a little idiosyncratic, especially in relation to the practical and lasting achievements of Shaker inventiveness, but the

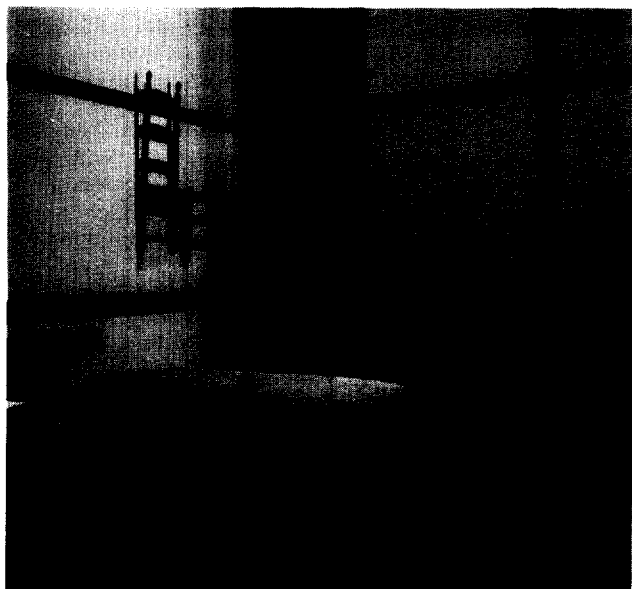


Figure 3. A retiring room

Perfectionists did also design practical devices, such as an animal trap, the sale of which provided a main source of their income. They also established a reputation in silk thread manufacture and in silversmithing (the latter continues at their Wallingford location today).

Nordhoff¹² commented: 'The Oneida Perfectionists established the reputation of their silk-twist in the market by giving accurate weight and sound material; the woollen stuffs of Amana (The True Inspirationists) command a constant market, because they are well and honestly made.' But 'the Shakers have shown more skill in contriving new trades than any of the other societies'.

All this is very different to the relationship we have with technology in conventional society today. As Dickson¹³ points out: 'Few of us are in the position to devise machines to perform tasks which we have selected or defined ourselves. For the most part, we have to rely on those machines which society makes available to us.' The ubiquity of Shaker inventiveness perhaps suggests that Dickson's desire today for 'the hold on innovation' to be wrested from 'the hands of a dominant social class' was indeed fulfilled in that Utopian society.

SHAKER ENVIRONMENT

One of the principal successes of the Shakers, which makes them stand out from so many of the other communitarian experiments, and which perhaps also helps to account for their relatively much greater success, was that they created their own, particular, total environment. From shoes to bonnets, each Believer was dressed in Shaker clothes, made by Shakers to Shaker design. Most of the tools and equipment they used every day were Shaker tools, making Shaker products for Shaker purposes in Shaker workshops. Their buildings were designed and made by themselves; the interiors were furnished and decorated in a unique Shaker style; the exteriors, with the gardens, orchards, roads and fences, created a unique Shaker landscape.

Visitors to Shaker villages usually commented on the neatness, cleanliness, order and air of quiet industriousness.

The streets are quiet, for here you have no grog shop, no beer house, no lock up; . . . and every building whatever may be its use, has something of the air of a chapel. The paint is all fresh; the planks are clean bright; the windows are all clean. A sheen is on everything; a happy quiet reigns.⁶

One gains the impression that there was no litter, no gates hanging, no fences broken, no paths unmended, no buildings in disrepair. Everyone was peaceful, industrious, and neatly dressed. Everything was as if new, soundly made, and in its proper place. Wingate⁵ thought that the sound construction of the buildings, for instance, 'would bring tears to the eyes of a jerry-builder'.

The buildings, many of them quite large, such as the four- or five-storey family houses, the big barns and workshops, were designed and detailed in the Shakers' own crisp vernacular. They were also painted in a colour coding system laid down in the Millennial Laws – white for the meeting house and light colours for the houses and workshops fronting the road, dark red or brown for the barns and back buildings.

Interiors were also specified in the Millennial Laws – colours for the floors and walls, and for the curtains, carpets and covers, what furniture in a room, etc. Colours and patterns were cool and quiet, and the overall effect of this controlled interior design is one of cultured simplicity.

Reflecting the preference for plainness and subdued, uniform colours, the furnishing of Shaker rooms naturally harmonized with their white plastered walls, the reddish-yellow floors, oiled and neatly carpeted, the doors, window frames, and delicately turned wall pegs of mellow brown. No distracting elements violated the quiet simplicity of these airy, well-lighted interiors. The colours glowed softly . . . A spirit of peace, almost of sanctity, pervaded the scene.⁷

Nordhoff¹² described the 'retiring rooms' (usually four-person) thus:

Each room contains as many simple cot-beds as it has occupants, the necessary washing utensils, a small looking-glass, a stove for the winter, a table for writing, and a considerable number of chairs, which, when not in use, are suspended from pegs along the wall.

The walls were bare of pictures, 'not only because all ornament is wrong, but because frames are places where dust will lodge . . . neatness, order and absolute cleanliness rule everywhere'.

The design of the Shaker environment even carried through into their dress. They wore their own particular uniform.

The dress of the men is remarkable for a very broad, stiff-brimmed, white or gray felt hat, and a long coat of light blue. The women wear gowns with many plaits in the skirt; and a singular headdress or cap of light material, which so completely hides the hair, and so encroaches upon the face, that a stranger is at first unable to distinguish the old from the young. Out of doors they wear the deep sun-bonnet known commonly in this country as a Shaker bonnet. They do not profess to adhere to a uniform; but have adopted what they find to be a convenient style of dress, and will not change it until they find something better.¹²

There was even a Shaker hairstyle, men's being 'cut straight across the forehead and suffered to grow long behind'. The clothes were generally in subdued colours. In contrast, the 'heavenly' clothes they wore' in their 'psychodramas' were bright, colourful and gay with shining buckles and buttons.

In all of these aspects of the total design of their community environment, the Shakers adopted a revolutionary functionalism, a century ahead of a similar concept in the Modern Movement in design. Many of the Shakers' design principles are precise statements of the later slogans of the Modern Movement philosopher-designers. For instance:

- Every force evolves a form
- Anything may, with strict propriety, be called perfect which perfectly answers the purpose for which it was designed
- Regularity is beautiful
- Beauty rests on utility

Shakers put function, utility, regularity above all else; from these came 'beauty'. Nordhoff asked Elder Evans, if the Shakers were to build anew, would they not 'aim at some architectural effect, some beauty of design?' Evans replied, 'No. The beautiful, as you call it, is absurd and abnormal. It has no business with us.' In building anew, Evans would 'take care to have more light, a more equal distribution of heat, and a more general care for protection and comfort, because these things tend to health and long life. But no beauty'.

In making the objects of their environment, the Shakers strove for the best, the soundest, craftsmanship. On this quality rested the reputation of their products in the world. It was a reflection of their beliefs; such as:

Do you work as though you had a thousand years to live, and as if you were to die tomorrow. (*Ann Lee*).

All work done . . . ought to be faithfully and well done, but plain and without superfluity. (*Joseph Meacham*).

Just as Shaker philosophy promoted the simple, the plain and the orderly, it repudiated 'superfluity'. A section of the Millennial Laws begins

Fancy articles of any kind, or articles which are superfluously finished, trimmed or ornamented, are not suitable for Believers, and may not be used or purchased.

There follows a long list of proscribed items, including: silver pencils, silver toothpicks, brass knobs or handles, gay silk handkerchiefs, superfluous suspenders of any kind, and 'many other articles too numerous to mention'. The section ends: 'Believers may not in any case or circumstances, manufacture for sale, any article or articles, which are

superfluously wrought, and which would have a tendency to feed the pride and vanity of man, or such as would not be admissible to use among themselves, on account of their superfluity.'

These attitudes towards design are a direct reflection of the Believers' spiritual philosophies. Andrews and Andrews⁸ argue that 'To create a new earth, to establish a society freed from sin and worldliness, they sought perfection in all their endeavours. The keys to the seeking were order, usefulness, simplicity. Shaker simplicity was a 'gift' — 'a divine call to turn away from pride and power and self to a life of the spirit'.

Merton¹⁴ compared this spiritualism and its manifestation in craftsmanship with the similar philosophy of William Blake (and also points out that Blake and the early Shakers were contemporaries, although having no interaction):

Neither the Shakers nor Blake would be disturbed at the thought that a work-a-day bench, cupboard, or table might also and at the same time be furniture in and for Heaven: did not Blake protest mightily at the blindness of 'single vision' which saw only the outward and material surface of reality, not its inner and spiritual 'form' and the still more spiritual 'force' from which the form proceeds?

. . . The Shakers believed their furniture was designed by angels — and Blake believed his ideas for poems and engravings came from heavenly spirits.

Andrews⁷ suggests that the nature of Shaker design embodies their beliefs:

Architecture and craftsmanship alike reflected such principles as union (basic uniformity of design), the equality of the sexes (balance, proportion), utilitarianism (adaptation to needs, durability), honesty (mastery of techniques), humility and simplicity (absence of pretence or adornment), purity (a sense of pure form).

. . . Builders and joiners, therefore, inevitably impressed their character, the Shaker character, upon their work. It has a recognizable look — not 'factory-like', as some described their buildings, not austere or 'grim', as Dickens once called their furniture, but rather like its users, dispassionate, reliable, unworldly.

There is a quality in Shaker design and craftsmanship which transcends the apparently mere negativeness of the Millennial Laws and the avoidance of 'superfluity'. The very positive aspects of their beliefs, values and attitudes are expressed and embodied consistently in their creation of their model world.

There was a consistent emphasis on regular alignment and orthogonal order in the Shaker environment. Buildings were rectangular and placed on similar alignments to one another. (The magnificent Round Barn at Hancock being a striking exception.) In dwelling and meeting houses a formal symmetry both reflected and imposed the separation of the sexes. Chimney flues from Shaker wood stoves jack-knifed through right-angled routes across the ceiling to their exit walls. The Believers own environmental behaviour was similarly constrained by the Millennial Laws: 'it is not orderly to cut up the dooryards into little cross paths, . . . all should keep on the walks.'

Within the uniformity of the Shaker environment, the individual member was respected and treated as such, and his particular uniform was just that — made for him, not standard issue. Every member was thus aware both of his personal identity and of his commitment to the community. In contrast to short-lived, one-off communities, the Shakers' ability to recreate their own special environment at different locations was a particular strength.

The Shakers' ability to produce a satisfactory environment, wherever they chose, provides the ultimate proof of their full mastery of the design process . . . The Shaker process and buildings appear to represent pure discipline. But in the closed system of Shaker life, every physical design made possible a responsive, opposite spiritual action. To appreciate the straight chairs, one must know the whirling dances. To understand the rigid alignment of buildings, one must envision members marching through their orchards or rolling woodlands singing of a procession

in their Heavenly City . . . despite its complexity, the Shakers' closed system was not unique, but replicable. It could be recreated anywhere that new members gathered to form a 'living building'.¹

Leap and shout ye living building,
Christ is in his glory come,
Cast your eyes on Mother's children,
See what glory fills the room!
(Shaker hymn)

UTOPIA OR DYSTOPIA?

Despite the Utopian aspects of the environment created by the Shakers, there were many other aspects of their life that appear unattractive today. Many people no doubt sympathise with the retired Shaker who, after 40 years' experience of Shakerism, commented that it was 'like boarding school with no vacations . . . no ending of the term'.¹⁵

From a modern perspective, Shaker society is a confusing paradox of Utopian and dystopian elements. In their viable, self-sufficient rural communes, practising a mixture of craftwork with a progressive technical ingenuity and ecologically-sound agriculture and horticulture, the Shakers perhaps offer a model of an 'alternative technology' lifestyle. In contrast their hierarchical, paternalistic government, repressive separation of the sexes and total celibacy, extensive rules and regulations controlling the minutest details of personal activity offer a dystopian vision of everything abhorrent to the modern communitarian.

It should not be overlooked, however, that from the Shakers' contemporary perspective the 'dystopian' aspects of their life might well have seemed less significant than they do from a modern perspective. Apart from Dickens, visitors to Shaker communities usually reported favourably. We should also remember that Shaker life offered a distinctly improved standard of living to the common people of the time.

From some of the dystopian aspects of their society, it might also be assumed that Shakers were frustrated neurotics, but Holloway¹⁶ suggests that the evidence of their work gives a contrary impression. In contrast with Shaker craftsmanship, he says, it is in 'the tortured furniture, the gaudy and tawdry trappings, and the grotesque upholstery of the "world" at the same period that we can see the products of frustration and neurosis'. And he adds a tempering note to our perception of the Shaker lifestyle.

At first sight, it seems a spartan and even a stultifying life; but it is worth remembering that the rules and regulations of any society seem more fierce on paper than they do in practice, when they are not always observed absolutely to the letter. It is also worth remembering that membership . . . was voluntary and could be renounced . . . at any time. We should not assume, therefore, that the Shakers were unhappy because they were subject to restrictions and repressions that might seem to us to be unbearable. The facts of Shaker craftsmanship alone, deny unhappiness. No one who was frustrated, repressed, discontented, or ill adjusted to life could have produced such simple and eloquent work, which breathes the air of tranquility and fulfilment.

DECLINE OF SHAKERISM

The graph of membership of the United Society of Believers is approximately symmetrical around its peak at the mid-nineteenth century when almost 6000 were members, in 58 families, in 18 villages. The Society had its most rapid growth in the first quarter of the nineteenth century — a period of religious revivals, and during which the Shakers offered a most practical alternative to prevailing society. No new families were founded after 1826, and there was a rapid decline in numbers after midcentury, particularly post-Civil War (1861-65).

The Civil War is often cited as a factor in the decline of the Society. Shakers were pacifists, but doubtless

many of the younger ones left to go to war. In the Kentucky societies the war was also a drain on their material resources; the Shakers supported neither side and often sheltered and fed both armies. The lucrative seed businesses (along trade routes to the South) of many of the northern families were ruined by the war.

Perhaps most important, after the war there was a different age dawning in America. Religion declined, there was rapid industrialization, a social emphasis on private enterprise and individualism; whilst the Shakers offered the complete opposite, taking radical, extreme views, counter to the prevailing social norms. They were 'largely self-sufficient, abjuring the profit motive, dependent on a handicraft economy . . . the product of an age that was passing'. Whilst for the mass of society, 'Not in personal salvation and perfection was Utopia to be sought, but in personal advancement and the opportunities presented by cheap Western lands, rich natural resources, the railroads, factories and beckoning machines.'¹⁷

The Shakers relied on recruitment; their celibacy rule meant that they did not regenerate themselves. Although they offered a free orphanage to the world's children, they put no compulsion on the children to stay once they matured. You either had 'the gift' to join, or you did not. The vast majority of the children found they did not have the gift, and left as soon as they had learned a trade from their Shaker foster parents. This free orphan facility, with no return on the Shakers' investment in bringing up the children, was also a drain on the Society's resources.

The Society has very gradually, but inexorably, declined towards extinction. In 1930, there were about 200 Believers; in 1940, 100; in 1950, 50; by 1960, some two dozen remained. Today, perhaps a half-dozen very elderly Sisters survive.

Many of the original Shaker buildings still survive, and some of the villages are maintained as museum sites. The village at Pleasant Hill, Kentucky, is particularly well maintained; so too is that at Hancock, Massachusetts. At Canterbury, New Hampshire, and Sabbathday Lake, Maine, Shaker Sisters still live, and these villages are also open to visitors. Many others are owned either privately or by institutions; the large village at Mount Lebanon, New York, for example, is occupied as a boarding school.

CONCLUSIONS

In many respects design research is concerned with the way things *should* be. It is concerned with improving the performance, safety, etc of designed objects, with improving the procedures used by designers, with improving design education, and so on. Some of these 'utopian' elements of design research tend to lead to questions of the role of design in society. For example, Johnson's¹⁷ comments on the relevance of design participation as a means towards a more decentralized society.

If, as many have argued, there is a close relationship between the nature of a society and the nature of its technology, then such questions and issues of design policy are a legitimate concern of design research since design is so closely connected with technology and technical change.

Through the example of the Shakers I have tried to explore some of the relationships between design, technology and society. The social values and religious beliefs of the Shakers were clearly reflected in the design of their artefacts and their attitudes to technology generally. Are not the values and beliefs of our own society similarly reflected in our own design and technology? Through case studies of the design policies of other societies, such as the one attempted here, we might better understand the role of design in our own society, and help clarify some of the 'utopian' aspects of design research.

REFERENCES

- 1 **Hayden, Dolores** *Seven American Utopias: the architecture of communitarian socialism, 1790-1975*, MIT Press, Cambridge, Mass (1976)
- 2 **Kanter, Rosabeth Moss** *Commitment and community: communes and utopias in sociological perspective*, Harvard University Press, Cambridge, Mass (1972)
- 3 **Rexroth, Kenneth** *Communalism: from its origins to the twentieth century*, Peter Owen, London (1975)
- 4 **Andrews, Edward Deming** *The community industries of the Shakers*, The University of the State of New York, Albany (1932) (Republished by Porcupine Press, Philadelphia, 1972)
- 5 **Wingate, Charles F.** 'Shaker sanitation' *The Sanitary Engineer*, (New York) Vol 3 (1880)
- 6 **Dixon, William Hepworth** *New America*, Hurst and Blackett, London (1867)
- 7 **Andrews, E.D.** *The people called Shakers: a search for the perfect society*, Oxford University Press, New York (1953) (Reproduced in a new edition by Dover Publications, New York, 1963)
- 8 **Andrews, E.D. and Andrews, Faith** *Religion in wood: a book of Shaker furniture*, Indiana University Press, Bloomington (1966)
- 9 **Neal, Julia** 'The Shakers, as they saw themselves and as others saw them' in **Elmer, R. Pearson and Neal, Julia** *The Shaker Image*, New York Graphic Society, Boston, Mass (1974)
- 10 **White, Anna and Taylor, Liela, S.** *Shakerism: its meaning and message*, Columbus, Ohio (1905)
- 11 **Baker, Arthur** *Shakers and Shakerism* New Moral World Series, London (1896)
- 12 **Nordhoff, Charles** *The communistic societies of the United States: from personal visits and observation*, John Murray, London (1875) (Republished by Schocken Books, New York, 1965, and Dover Publications, New York, 1966)
- 13 **Dickson, David** *Alternative technology and the politics of technical change*, Fontana, London (1974)
- 14 **Merton, Thomas** 'Introduction' in **Edwards and Edwards** *Op Cit* (1966)
- 15 **Briggs, Nicholas A.** 'Forty years a Shaker' *Granite Monthly*, Vol 52, (1920) pp 463-474 and Vol 53 (1921) pp 19-32, 56-65, 113-121, 150-155
- 16 **Holloway, Mark** *Heavens on earth: utopian communities in America, 1680-1880*, Dover Publications, New York (1966)
- 17 **Johnson, J.** 'A plain man's guide to participation' *Design Studies* Vol 2 No 1 (July 1979) pp 27-30