Five More Chairs: One View

Does traditional seating meet contemporary comfort standards?

by Robert DeFuccio

EDITOR'S NOTE: In January and February, Woodcraft Supply Corp. of Boston inaugurated a new display space at its retail store with a show of five traditional chairs made by contemporary craftsmen. Three of the chairmakers—Dunbar, Moser and Alexander—have written books about their techniques. So we asked Bob DeFuccio to go there and have a sit, and to give these five chairs the same rigorous scrutiny he had applied to five contemporary designs (Jan. '79). DeFuccio, of Spinnerstown, Pa., is an industrial design consultant for two chair manufacturers—Gunlocke Co. and Thonet Industries—and has designed chairs now in production at Gunlocke and Stow/Davis Furniture. He designs and makes his own full-scale prototypes, and teaches woodworking and furniture design at Philadelphia College of Art.

In the following discussion and photo captions, all angular measurements of seat and back pitch relate to the horizontal floor and to a vertical line, respectively, not to the included angle formed by the seat and back.

Whether one's own tastes run to traditional or contemporary furniture, these chairs certainly merit attention. All five have been made with care and great technical expertise. The joinery is uniformly well done, the finishes are good. The choice of woods reflects a long tradition of craftsmanship and detailed lore. The forms are familiar to everyone: Their creators have made no effort to challenge our preconceptions. To many people, these chairs will evoke comfortable images of what chairs should be like. But they all seem to sacrifice comfort for historical accuracy. Their scale reflects people who weren't the same size as people today, and sometimes other modes of sitting. Many people will feel that these problems are overshadowed by what these chairs offer in the way of craftsmanship and esthetics. Others will feel that a chairmaker should heed the physiological needs of the sitter as well as his psychological need for the familiar.

Continuous-arm Windsor chair, made by Michael Dunbar of Portsmouth, N.H. Overall width: at arms, 21¾ in.; at seat, 17 in. Overall height: 35½ in. Seat height: 17 in. Seat pitch: 3½°. Back pitch: 14°. Seat depth: 20⅛ in. overall, 15⅜ in. usable. Seat width: 17 in. Height of arms above seat: 9¼ in. Longest back spindle: 19¼ in. Weight: 9 lb. Price: $350.

Michael Dunbar's continuous-arm Windsor chair is a fine example of a well-proportioned, lightly scaled, lightweight chair, whose heritage dates back to early 18th-century England. Dunbar made it by hand, using 18th-century methods and tools. (The procedure is described in his book, *Windsor Chair Making*, Hastings House, 1976.)

The seat is New England white pine, the spindles and arms are red oak, and the leg turnings and stretchers are maple. The pine seat ensures a lightweight chair, and also carves easily and quickly. The maple is close and straight grained, strong and turns easily. Rived red oak is strong and when shaved to thin sections, resilient. Red oak is also right for the bow back because it can be readily steam-bent. The chair is finished with two slightly transparent coats of green milk paint, which obscures the differences of the several woods and allows one to visually read the form as a unified whole.

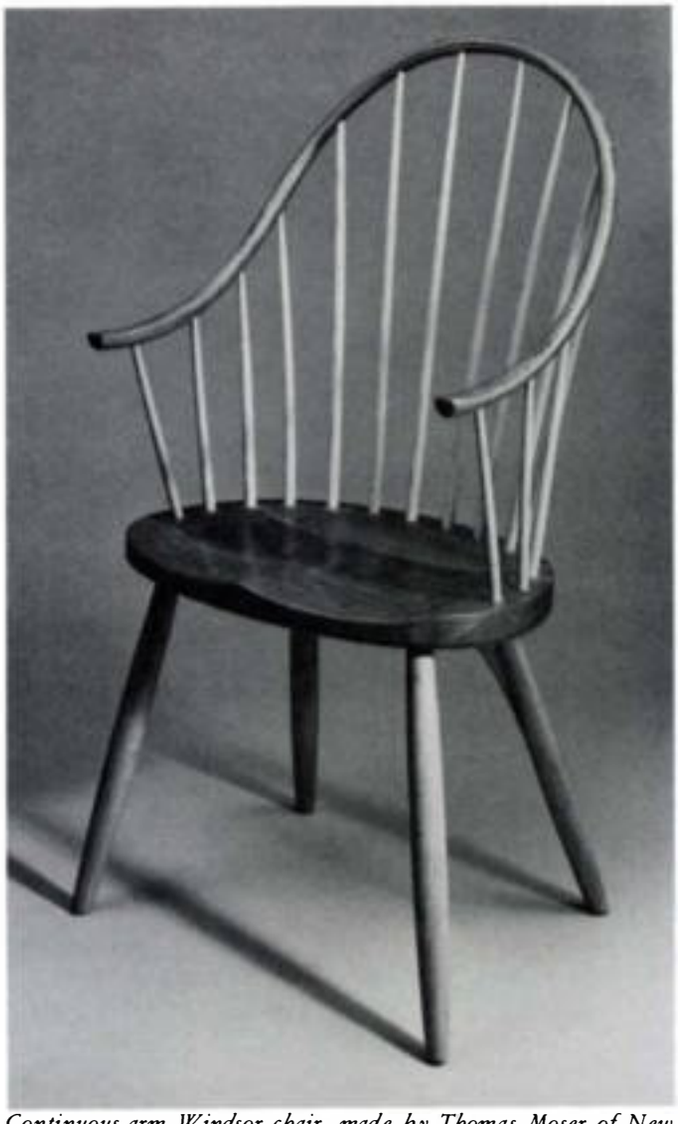
In studying the size and sectional dimensions of the parts, one soon realizes that these dimensions make structural sense and probably evolved by trial and error. The spindles are thin enough to flex, but strong. The bow back is square in section, measuring 13/16 in. by 13/16 in. where the spindles enter, and becomes a flat rectangle ½ in. by 1 in. where it bends into the arm. This shaping provides good engagement for the spindles, yet reduces the chance of breakage during bending. The arm post turnings are heavier than the other spindles, for strength and support. The seat is 1 13/16 in. thick at the rear, plenty of bulk for the spindle mortises, and thick enough for pronounced scooping—visually appealing and comfortable to sit upon. The unsanded turned legs are substantial and look crisp. The side stretchers swell to increase the amount of wood around the joint where the center cross-stretcher enters.

A key to the strength of this chair is assembling the bow under tension, done by compressing the spindles down into

place with the bow. This construction permits the chair back to flex under the load of someone leaning against it, but not to weaken. The back is significantly strengthened by the two spindles that connect the upper part of the bow to the rear extension of the seat. From the side view, a sturdy triangle is formed. All the spindles are wedged from above as they go through the bow back, and from the bottom as they penetrate the seat. The four legs are also wedged through the seat.

The chair is logical and elegant, and its scale and proportions are very appealing. The combination of thin spindles, pronounced saddling of the seat, sharp, crisp turnings and changes in section as the back bow becomes arms, all contribute to visual interest. Both the shape of the parts and the residual tool marks on them reflect the tools of the chairmaker, and these traces of manufacture do not look out of place. A small assymetry results from the way the holes were bored in seat and back. The form of the chair accepts this irregularity and is even enhanced by it. One gets the impression of complete control of the material by the craftsman, and of a form that has evolved over time. Dunbar has burned his name ¼ in. deep into the bottom of the seat, which is not painted. His intent is to discourage anyone who would plane the name off and present the chair as an antique.

As far as meeting contemporary seating needs, this chair has problems. The major one is the narrowness of the seat. The usable distance across the seat at the rear is only about 12 in., limiting the number of people who could use it. The back is comfortable, even though its pitch is too much at 14°. Modern designers consider 9° to 11° ideal for a pull-up chair. It is admirable that Dunbar has revived the old method of making American Windsor chairs, but to me the value of chairmaking of this sort is to understand yesterday's technology and joinery in an effort to make better chairs today. To make his Windsor chairs more effective, I feel Dunbar should proceed one step farther and rescale to fit today's people.



Continuous-arm Windsor chair, made by Thomas Moser of New Gloucester, Maine. Overall width: 22⅜ in. Overall height: 41¾ in. Seat height: 17½ in. Seat pitch: 2°. Back pitch: 12° (at two center spindles). Seat depth: 15⅝ in., 14⅛ in. usable. Seat width: 22¼ in. Height of arms above seat: 10 in. Weight: 11¾ lb. Price: $295.

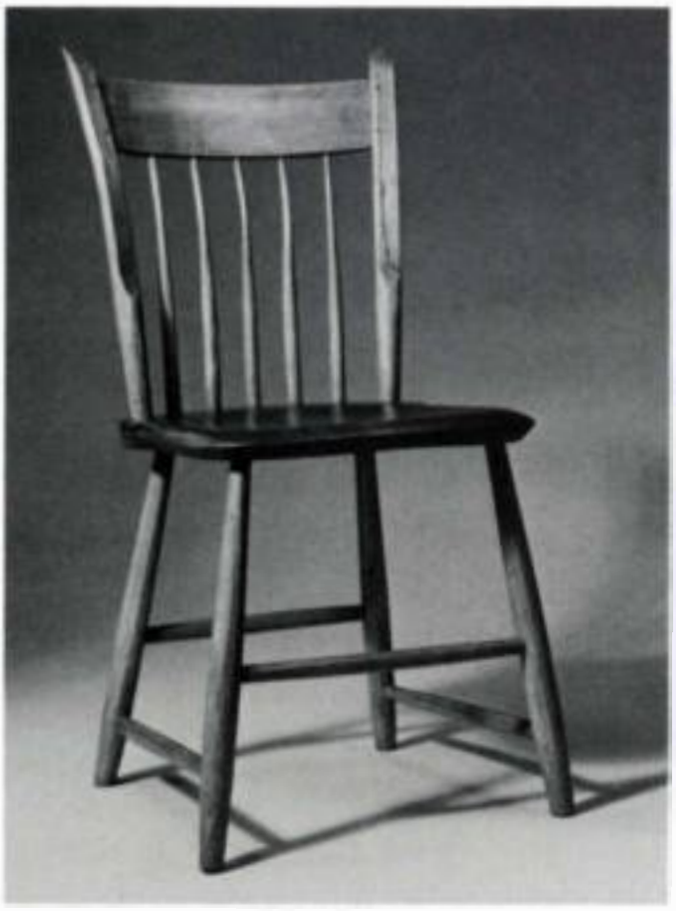
Thomas Moser's armchair is strongly influenced by traditional Windsor chair design. He has taken many of the standard elements to create his own contemporary version of an established design. (Moser's book, *How to Build Shaker Furniture,* Drake/Sterling, 1977, includes four ladder-back chairs and a bench, but omits the chair shown here.) Moser's chair is interesting because of its delicacy, but disturbing because of proportioning flaws absent from historical models. The back seems too high (41¾ in.) and the seat too short (14 in.). The chair looks compressed. The short seat provides no thigh support and is easy to slide out of because the pitch is only 2°. I put a ¾-in. spacer under the front legs, which almost eliminated the problem. The pitch was then 4½°. The seat is made from three pieces of edge-glued cherry, with the grain running side to side. It is nicely carved and scooped.

The continuous back rail and arms is bent from laminated cherry veneers. It is an eight-ply construction, with the veneers twisted during bending to permit the change of bending planes. The 14 back spindles are turned white ash. They all penetrate the back and arms, and are wedged with cherry wood. They also penetrate the seat and are wedged from the bottom. The contrasting color of the ash spindles cut flush with the cherry back and arms creates a strong graphic pattern that changes from almost perfect circles at the top of the back to long ellipses at the "elbow." This calls attention to the joinery but is also a distraction. The width of the arm is only 1⅛ in.—a wider arm would be more comfortable.

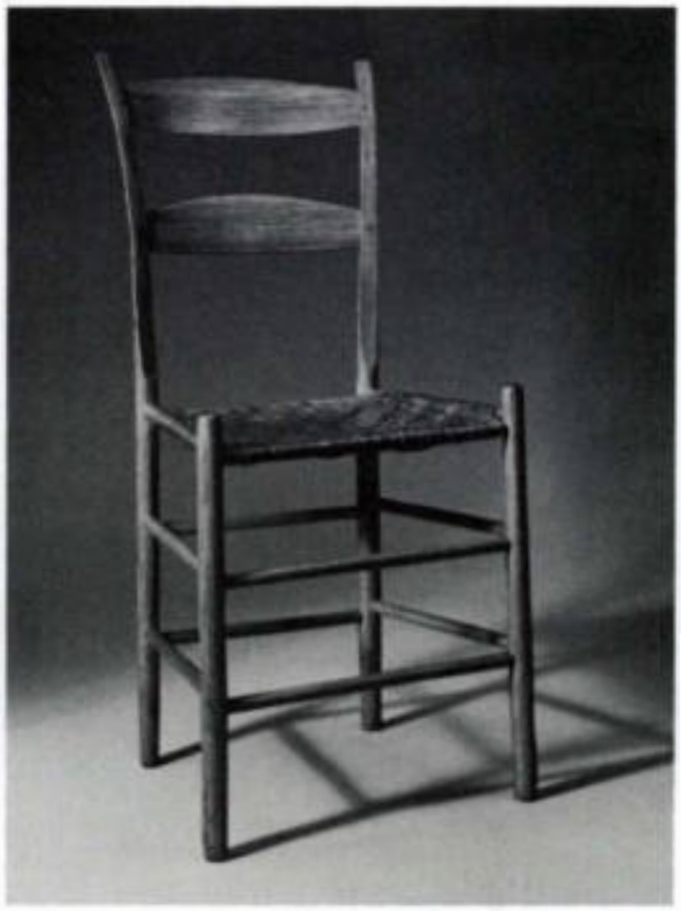
The entire back assembly flexes and adds to the general comfort of the chair. However, I doubt its strength, since the longest spindle is 24 in., 3¾ in. longer than the longest one on the Dunbar chair, and without that chair's triangulating back braces. The arm-supporting spindles are the same diameter as the other 12 spindles. A heavier arm support has to be stronger, and would be preferable.

The turned maple legs are joined to the seat with the standard wedged dowel joint. Moser has eliminated the conventional leg stretcher system and replaced it with two curved laminated braces. The braces are mortised into the back legs and doweled into the seat. This approach provides ample support for the rear legs, although I think it is visually unrelated to the rest of the chair. The front legs remain unsupported and rely solely upon their round tenons into the seat.

Moser has made an admirable effort to adapt design and structural elements from the past to create his own version of the Windsor. It is delicate and well-made, well worth the effort it would require to refine it and overcome its problems.



Thumb-back Windsor sidechair made by David Sawyer of East Calais, Vt. Overall width: 15½ in. Overall height: 32¼ in., 30½ in. to top of back rail. Seat height: 16¾ in. Seat pitch 2½°. Back pitch 19½°. Seat depth: 15¼ in. overall, 14 in. usable. Seat width: 15½ in. Weight: 7½ lb. Price: $110.



Bent-back sidechair by John D. Alexander Jr. of Baltimore, Md. Overall width: 17 in. Overall height: 35¼ in. Seat height: 18 in. Seat pitch: 3°. Back pitch: 15½° (at lower back rail). Seat depth: 13 in. Seat width: 17 in. Width of back: 15 in at top, 13¾ in. at seat. Weight 5½ lb. Not for sale.

David Sawyer's sidechair is called a thumb-back Windsor because of the shape of its back posts. It has a scooped cherry seat, with hickory legs, spindles, stretchers and back rail. It is well proportioned and crafted—visually, very fine. Sawyer is a serious student of traditional methods, who works mainly by splitting and shaving green wood.

Joinery details include legs that penetrate the seat and are wedged, back posts that neck down to dowel ends, penetrate the seat and are wedged from the bottom, stretchers that dowel into the legs and back spindles that dowel into the seat and back rail. The steam-bent back rail is tenoned into the back posts and held in place with four small pins.

The splay of the legs from both the front and side views makes the chair sturdy and stable. The height of the front stretcher in comparison to the side stretcher prevents kicking it while sitting. The angle of the back, 19½°, first seemed comfortable, but it is much too much deviation from the standard 9° to 11°. It offers little or no support when used as a dining or work chair. The back rail is only ½ in. thick at its heaviest, and the back spindles reduce to a scant 5/16 in. diameter to join its lower edge.

All the corners and edges of the chair are eased and pleasant to touch, with the exception of the tops of the back posts. They discourage leaning one's arms against them, and could well be blunter and softer.

The chair is well engineered, though I see a potential problem with the strength of the back. The back posts are not a continuation of the back legs, and depend wholly for strength upon their dowel joints into the seat. The back spindles do add some strength, but after a year in a centrally heated house, the back posts might shrink. The dowel joints would loosen and the back could be vulnerable. The back currently flexes—comfortable, but not reassuring.

The seat is too small—the usable depth is only 14 in., minimal, as is the width, 15½ in. More shaping of the seat in the form of saddling or scooping would also make the chair more comfortable. The seat height, 16¾ in., is a little low and this would be evident if the chair was used at a dining table—normally 29 in. high or more.

John D. Alexander Jr.'s chair is a post-and-rung construction, with a woven seat and bent back posts and slats. The chair's posts are riven white oak, with rungs and back slats of riven hickory. The seat is hickory splint webbing. It is a marvelous chair, like Sawyer's and Dunbar's made entirely by hand in the old way. An appealing feature is its light weight. a mere 5½ lb. Easily lifted with one finger, the chair could probably support a 300-lb. person. (Alexander, like Dunbar, has devoted an entire book to his chairmaking methods. It is *Make a Chair from a Tree*, The Taunton Press, 1978.)

The chair is resilient and reasonably comfortable, although the severely bent rear posts provide more back pitch than is necessary—15½°. It is relatively stable, even though the rear legs tilt in 3° from the side view. There is an obvious limit to

how far back one can lean without upsetting results.

The hickory-splint seat is made from strips of inner bark 1/16 in. thick and 3/4 in. wide. When woven this material is strong, yet flexible enough to yield slightly when one sits.

All 12 rungs dowel into the legs in a staggered configuration. Their mortises don't interfere with one another except for an intended small tangential overlap, which mechanically locks half of the rungs in place. The bent back slats are only 5/32 in. thick and lead directly into the back post mortises, where they are pinned in place. The joinery derives its strength from the green front legs and rear posts shrinking around the drier rungs.

The woven seat has a center depression to it, a result of the side rails being higher than the front and rear rails. This dished effect provides a more comfortable seat than a flat one. The seat, at only 13 in. deep, is severely short and its 17 in. width is also minimal. The front legs protrude above the seat rails, interfering with the sitter.

A fine individual effort by Alexander, this chair is an excellent example of using early craft. But like the other chairs, it is not an answer to properly seating someone of average size in today's society.

Brewster chair made by Armand La Montagne of North Scituate, R.I. Overall width: 24¾ in., at back: 18¾ in. Overall height: 47½ in. Seat height: 18½ in. Seat pitch: 0°. Back pitch: 0°. Seat depth 15¼ in. Seat width: 23½ in. Height of arms above the seat: 9½ in. Overall height of front legs: 30⅛ in. Diameter of legs: 2⅜ in. Width of back between arms: 15½ in. Weight: 31 lb. Not for sale.

Armand La Montagne's Brewster chair is a duplicate of one he made about 10 years ago that found its way into the permanent collection of the Henry Ford Museum in Dearborn, Mich. The earlier chair was an almost perfect replica of a chair made in the 1600s by John Alden for William Brewster, elder of the Pilgrim Church, who came to America aboard the Mayflower.

There are two known authentic Brewster chairs. One, believed to be Brewster's own, is in Pilgrim Hall in Plymouth, Mass. The second, made after Brewster's death in 1664, is in the Metropolitan Museum of Art in New York City.

La Montagne's first bogus Brewster was purchased by the Henry Ford Museum in the early 1970s for $9,000. La Montagne made this reproduction to document the first hoax. His objective was to construct a historically accurate chair, with enough consistent variations to be accepted by experts as authentic. In 1977 he achieved nationwide recognition when the Brewster chair in the Ford collection was discovered to have been made by him.

La Montagne made no money from the hoax and says he never tried to obscure what he was doing. His choice of chair was influenced by Wallace Nutting's statement in his *Furniture Treasury* that one or two more Brewster chairs might exist, other than the two already documented. In adapting the original design, La Montagne varied the number of spindles and changed the wood from white ash to white oak.

Most of La Montagne's work went into aging the completed chair. This included scratching and gouging the wood, burning the parts with an acetylene torch and removing all traces of carbon by scraping and bleaching. The chair was stained black, painted red, smoked for several days, coated with an emulsion of household dust and dilute vinyl glue, and waxed. It had aged 300 years in a matter of months.

The chair was then placed where it could be seen, and sold by a friend of La Montagne to a local antique dealer. A series of buyers bought and resold it until the chair was "discovered" by the Ford Museum. With its authenticity accepted, La Montagne next set out to prove the chair actually was a fake. He began to circulate rumors about its recent heritage, which the museum at first ignored. But in the summer of 1977, the museum re-examined the chair and for the first time X-rayed it. La Montagne had said X-rays would reveal that the holes in the leg posts had been drilled with a modern bit. So it was. The museum admitted it had made a costly and embarassing mistake.

All parts of the chair are turned, except for the flat slab seat. A series of inscribed lines on the leg turnings help locate the hole positions for the ends of the round rungs. All the cross-rails are doweled and pinned into the legs. From above, the seat is a trapezoid tapering quickly from front to back.

Two of the vertical spindles are missing from the lower front of the chair. La Montagne made them, then removed them, as a logical alteration by some imaginary owner who wanted a space for his feet to rest.

The Brewster is not comfortable to sit in. The legs are perpendicular to the floor, the back has no pitch, the seat is parallel to the floor. The seat height, 18½ in., indicates that the chair was used with a low footstool which kept one's feet off cold, drafty floors. □