A TRAVELING EXHIBITION OF Oversized Drawings

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From May 1987 until April 1988 the Montreal Museum of Fine Arts circulated a large exhibition of drawings by Montreal contemporary artist Betty Goodwin. Over 100 hundred works traveled to museums in Toronto and Vancouver before returning for their final showing in Montreal. In addition, smaller exhibitions of selected drawings were sent to two galleries in New York. Although many of the traveled works were framed drawings of standard size, the focal point of the main exhibition consisted of several drawings of enormous scale. The largest, Untitled No.1 (fig. 1) from the Swimmer series, measures

Fig. 1 Untitled No.1 from the Swimmer series

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121 1/2 by 169 1/2 inches. It is made up of seven sheets of lightweight white paper, each about 42 inches wide. They are arranged in two layers: The small green rectangle (which appears dark grey in the photograph) and the figure visible in the top left corner of the work are painted on the bottom layer of three adjacent sheets of paper. Overlapping these and extending beyond them by one paper panel is the series of four sheets bearing the wide gold rectangle (light grey in the photograph) and the central figure. The thin paper is naturally translucent, and is made even more so in the image area where it has been saturated with oily media. Except for the single layer on the far right, then, two superimposed sets of drawings work together to make up the whole drawing.

Untitled No. 1 was one of several drawings which had formed part of a 1983 installation called In Berlin, A Triptych: The Beginning of the Fourth Part. Another element of the installation is the Passage. Although it is essentially a sculpture because of its metal framework, it still falls into the domain of the Paper Conservator because it is draped with eight 200 inch long paper panels. The exhibition also included eight other large unframed drawings, similar to Untitled No. 1. As a result, arriving at methods of safely traveling and presenting this show was an enormous undertaking.

There were two main problems: the packaging and the hanging of the unframed drawings without subjecting them to undue risk. Traditional framing was not practical due to the size of the works and their unique configuration. Furthermore, the artist's original intent - to hang them directly on the wall with no barrier between them and the viewer - was to be respected if at all possible. Our curator was adamant that the fluid atmosphere of the drawings, which she describes in her catalogue essay as suggesting "the depth of the sea and the menacing quality of its immensity," must not be given the effect of an aquarium by a protective sheet of plexiglas.

When Betty Goodwin first created and exhibited these drawings she simply pinned them to the wall. Repeated hangings had already resulted in many tears and losses along the top and bottom edges. For our traveling exhibition, I looked for a new hanging method which would prevent further damage to the thin paper. I considered clamps, hinges or long tabs to extend the top edges of the drawings; however, given that there was a time constraint and that several of the drawings did not belong to the Museum and would arrive at the last minute, I felt a quicker and easier solution was needed. The answer was magnets.

I scaled down my initial idea - that of hanging the drawings with magnets on giant refrigerator doors - to the use of narrow metal bars fixed to the wall where magnets would support the top edges of the drawings. The small round magnets to be used would be no more apparent than thumb tacks along the top edge. I soon found that the three-eighth inch diameter magnets I first ordered would have been sufficient for the single-layer drawings, but that the double-layer drawings needed stronger support. Many of these had been reinforced with one or two layers of cloth tape along the weakened top edges, so the magnets had two be effective through four to six layers of material. In the end I opted for larger magnets with a diameter of five-eighth of an inch. Though visible, they were positioned so far above eye level that they did not interfere with the appreciation of the drawings.

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Had I been able to weigh the drawings I could have used a mathematical formula to determine the size and number of magnets required. Instead, I used mock-ups. Surprisingly, experience showed me that a heavyweight support could be easier to hang than a lightweight paper. Several new works created specifically for a New York venue were executed on a heavy draughting support called Geofilm, which is made of mylar covered with a translucent coating. I had not expected to be able to hang these drawings with magnets; however, they proved just heavy and rigid enough to hang flat and almost immobile on the wall, and were only minimally moved by air currents, which proved to be the biggest danger to the lightweight drawings. Furthermore, the use of pins was particularly damaging to this type of support. Although it is hard to start a tear in Geofilm, once started, the tear will "run." The use of magnets prevented this kind of damage.

In order to use the magnet system the following materials are required: The steel bars to be fixed to the wall must be just shorter than the widths of the drawings and should measure about 1 1/4 inches wide and 1/8 inch thick to allow for the countersunk screws. These screws should be stainless steel or plastic-coated to eliminate rust, oil or grime which will stain the paper. The edges of the metal bars are bevelled and sanded smooth. The faces are sanded so they will take a coat of white paint and blend in with the white walls despite the translucency of the paper. The drawings are held against the metal bars with ceramic magnets. These are grey and must be painted to avoid marking the drawings and to be made inconspicuous. Ceramic magnets come in eight grades, based on their energy product rating. I used grade 5, which is the strongest in the series of standard-type magnets. The higher grades are specialty magnets which involve a huge leap in power and cost as well as some undesirable characteristics such as specific shape requirements and demagnetization with handling. Grade 5 magnets will maintain their original strength for at least 100,000 hours (eleven and one half years) unless they are chipped or scratched. Strip magnets were also considered for the aesthetic advantage that they would appear as a single continuous line; however, they are weaker than ceramic magnets unless incorporated into a steel circuit: Thin steel must be laminated to one side so that a steel-magnet-steel sandwich (and with it, increased bulk) is created. Moreover, for my purposes rows of individual magnets were more convenient and adaptable. A few magnets could be removed so a drawing could be shifted to align with its partner, or a row could be lifted off a sheet one by one and gradually replaced on a subsequent sheet as additional layers were superimposed. Because the top edges of the drawings were quite irregular, the various components of the image would not meet if they were lined up exactly. Furthermore, some of the sheets had to overlap each other as much as half an inch and others had to abut precisely for the image to be coherent. The magnet system was flexible. The drawings could easily be shifted vertically or horizontally to accommodate these irregularities.

Over time we simplified the procedure for hanging the drawings. The metal bars were screwed to the walls at a position designed to correspond with the top edge of the paper sheets. Each single sheet was unrolled from its specially prepared tube onto a protective paper on the floor. Once it had been positioned correctly on the floor in line with the metal bar, that sheet was gently pulled up the wall where it was anchored to the bar with a row of magnets. (fig. 2) Subsequent sheets were added in like manner and subtle adjustments in positioning were made as needed. Though more complicated in the case of the layered drawings, the hanging was surprisingly simple and quick. In fact, in Vancouver

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4Thanks to Sue Maltby, artifact conservator at The Canadian Conservation Institute in Ottawa, Ontario, Canada, who had used magnets to mount a fragile pair of shoes to an exhibition support, and who put me in touch with a company which could provide technical information.
and Montreal when our curator decided to rearrange the drawings after all had been hung the crews of preparators protested only mildly.

Having anticipated light fluttering of the drawings in air currents caused by crowd movement and air conditioning, I had prepared small, round metal plates which could be screwed to the wall at the bottom of the drawings to accommodate magnets there; however, at the first showing in Toronto I found that the drawings did not hang naturally when fixed at the bottom corners. On the next leg of the exhibition, a brain-storming session with the preparators at the Vancouver Art Gallery led to the use of fine transparent nylon thread that was stretched across the bottom of each drawing and pinned to the wall on either side of it. When the thread lay flat against the drawing it created only a faint shadow and was almost invisible.

Fig. 2. Each sheet is anchored to the metal bar with a row of magnets.
In Vancouver and in Toronto the exhibition went off without a hitch: The drawings hung securely on the walls, their bottom edges moving only minimally. It was at home in Montreal, when we were confident that we had already resolved all potential problems, that the unforeseen occurred. One drawing had been hanging undisturbed for over a week when it was suddenly lifted by strong draughts that filled it like a sail. The immediate solution was to hold the drawing against the wall with a "bandage" of wide paper extending across it. This horizontal band was taped to the wall on either side of the drawing to keep the air from getting behind it. Adjustments were made to the ventilation system to eliminate air movement and to ensure that the problem would not recur. And instead of relying on only one nylon thread across the bottom of the works, three or four threads were extended across them so there would be less opportunity for air to enter from behind should any more strange weather systems arise. The guards also began to take a more active interest in observing the drawings and reporting on any peculiarities. Much to my relief we never experienced that problem again. To avoid such a situation, anyone planning to hang unframed drawings would be wise to conduct thorough long term tests of patterns of air movement in the gallery.

I began this project thinking of the use of magnets as an unusual technique designed for unusual drawings. I did not expect it to be effective for the hanging of two quite different drawing supports—the very thin, light paper and the heavy Geofilm. I was also surprised to find that throughout the exhibition the magnets sparked considerable interest, especially on the part of artists looking for new ways to display their own large drawings. Magnets would be convenient, for example, for short term hangings, such as the presentation of large drawings to acquisition committees. Although the magnet system is unlikely to become a common museum mounting technique it could have many useful applications.

The second problem faced in preparing this exhibit was the design of a system to package the large format drawings. Flat storage was rejected for the works we packed. For the eight sheets of paper, each about sixteen feet long, which drape over the metal Passage of In Berlin, horizontal storage on tubes was the only practical and safe solution. Even for the shorter drawings, (those measuring only eleven feet), flat storage was theoretically possible but would have been problematic. Air transport of such exceptionally long crates would have been out of the question. In fact, an exception was made when the drawings on Geofilm were transported to their first destination because the media was still too fresh to permit rolling. The crate constructed for them was not really adequate, however, because a satisfactory method of securing them had not been developed. They tended to slide with handling, whereas the rolled works remained fixed securely. After our exhibition when the owner of the works on Geofilm was invited to exhibit them in Belgium, they did travel on rolls.

Twenty-five rolling tubes were needed to transport the unframed drawings. The largest available acid-free tubes then available had only a 6 inch diameter, which I felt was insufficient because over the long term rolled drawings tend to retain some curl. A tube of larger diameter would minimize this curl and reduce the possibility of damage during unrolling, especially should the drawings become brittle over the years due to the artist’s lavish use of oily media. We started with sono tubes of twelve inch diameter. First we covered them with a layer of thick Pellon non-woven polyester to absorb and even out any irregularities in the surface of the tubes. Next came a layer of 5 millimeter mylar as a barrier against acidity. Finally, a layer of heavyweight, acid free, buffered paper was added to neutralize acids. The tubes were about ten inches longer than the widths of the drawings so that when the ends of the tubes rested on supports the drawings would not be compressed. Each drawing was covered with a length of acid-free glassine paper to prevent media transfer to its verso as it was rolled and to minimize abrasion that may have been caused by
a less slick interleaving paper. The glassine interleaf extended beyond the end of the
drawing so it could be wrapped around the outside and then be fixed at the edges with
archival quality tape. Each drawing was rolled individually onto its own tube. Then it was
covered with a layer of the heavyweight buffered paper.

Existing museum crates were adapted for the transport of the drawings. This was a
simple matter of fitting the ends of each rolling tube with removable ethafome supports
which held them securely in the insulated crates. The tube system, designed for transport,
also proved ideal for permanent storage. Before the exhibition our own drawings had been
rolled, sometimes two or three panels to a tube, around narrow, unisolated acidic tubes.
Our technicians built rolling racks, each of which horizontally supported two rows of three
or five of the new tubes. The drawings can now be wheeled out of storage and into a
gallery as a unit.

The enormous scale and unusual format of these Betty Goodwin drawings
demanded inventive methods of both packing and mounting. The solutions devised to meet
the needs of this temporary traveling exhibition have proven useful as well for permanent
storage and future exhibitions. In addition, the magnet system offers many other potential
applications, especially since so many contemporary artists are expanding their works
beyond traditional dimensions. As long as artists continue to experiment with new materials
and formats conservators will have to equal them in ingenuity.