

Jasper Johns'

Untitled 1965-'65

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Introduction

Untitled, 1964-'65 (fig.1) is an imposing painting, constructed of five colour field elements and three-dimensional everyday objects. It was acquired by the Stedelijk Museum of Amsterdam in April 1966 and is still the only painting by Jasper Johns in a Dutch collection. This painting is seen as one of the highlights of the collection of the museum. It has been often on display and was present in all major exhibitions of the artist.

Its first conservation treatment in the autumn of 2004 that comprised preliminary surface cleaning and concomitant technical examination of the painting, investigated the sensitivity of the paint to water and polar solvents. Other twentieth-century works made in oil paint demonstrate similar problems and the results of analytical investigations of this phenomenon are presented elsewhere.¹

The limited information published on Jasper Johns' working methods and materials in the 1960s motivated an investigation, which included a technical study of the work, an interview with the artist, aged 76 at the time of writing and visits to art supply shops in New York City where materials were purchased.² This new evidence is combined with technical literature related to the painting.³

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Fig. 1 Jasper Johns, *Untitled*, 1964-65, oil on canvas with objects, 182.5 x 478 cm, Stedelijk Museum Amsterdam (inv.no. A 24222)

The present technical examination and analysis highlighted a number of interesting features, including Johns' iconography, his working philosophy, and his methods and materials. These aspects are discussed in this paper, together with the history of the painting and its context.

History

Jasper Johns (born 1930) started to paint *Untitled* in the fall of 1964 in his studio in Edisto Beach, South Carolina⁴ and finished it in 1965: 'I try to live there as much as I can but I have to be in New York most of the time.'⁵ The painting was exhibited at the Leo Castelli Gallery⁶ from 8 January – 2 February 1966 in the exhibition *Leo Castelli - Ten years*.⁷ In his introduction to the catalogue, David Whitney writes: 'The exhibition commemorating the anniversary contains a single work by each of the artists represented by the gallery. These works are chosen primary because they are both representative and seldom viewed to the public.'⁸

In April 1966 the Stedelijk Museum bought *Untitled* from the *Leo Castelli Gallery*.⁹ Edy de Wilde (1920-2005), former director of the Stedelijk Museum to whom the museum owes its important collection of works of American artists, accounted for the purchase of the painting: 'Jasper Johns like Rauschenberg has created the link between the generation of action painting and the so-called pop artists. In the beginning his work is characterised by far more pictorial character, than Rauschenberg's. The recent work, which belongs to the proposed paintings for acquisition, shows its importance to the young geometrical, the so-called hard edge-painters in Europe and America.'¹⁰

While early on the work is simply referred to as 'triptych', De Wilde mentions in one of these letters 'a triptych, titled *untitled*' and in another letter the work is called 'UNTITLED' and also 'triptych, 1964/65'. In the records of the Stedelijk Museum the title of the work is recorded as *Untitled*. Johns has painted numerous works given the name *Untitled* from 1954.

Polyptych iconography

The concept of the polyptych is associated with the religious art of Byzantium and with late medieval art. Throughout the history of painting, artists have continued to use the triptych as a model, often remaining loyal to the traditional presentation. In the mid twentieth century the polyptych format experienced a popular revival amongst artists, with modifications from the traditional form. Although these contemporary and modern interpretations are often widely different from their models in their imagery, size and shape, the overall effect

suggests a traditional interpretation. In Johns' *Untitled* polyptych, however, religious significance is lost in favour of visual abstraction and associative images and signs. From the 1950s a similar approach was taken by a number of artists painting in the USA.¹¹

In his early years as a painter, Johns worked in a studio in the same building as his artist colleague and friend Robert Rauschenberg.¹² The influence of this artist is evident in the exploration of the theme of Rauschenberg's so-called *Combine-paintings*. In these works, all objects were included in a three-dimensional way, for example in *Charlene* (1954).¹³

Johns used the multiplication of panels in a diverse way and explored the theme of series and repetition from the mid fifties on. He fixed several canvases together for *White Flag* (1955) and even built his paintings up in multiple layers by mounting canvases, one on top of the other in *Three Flags* (1958). Ten years later he created his largest work in this form: *Map* (1967-71), which comprises a large number of associated triangular canvases.

Construction

The large-scale painting is typical of Johns' work from the early 1960s. It is constructed of five parts linen canvas on stretchers of different sizes. The overall visual impression is that of three areas of bright colour arranged in a manner that gives a sense of a triptych. The large central panels are painted mainly in cadmium red and cobalt violet, contrasting with the predominantly ultramarine blue panel on the left side and a cadmium yellow panel on the right. In contrast to the structure of a traditional triptych, where the two side panels can be closed, Johns' triptych comprises fixed members. The four stretchers of the central part of the painting are fixed with metal bars at the back.

In contrast, a small square cadmium orange canvas is attached with a hinge to the blue panel on the left, which allows the panel to be closed and opened. The intention for the panel's mobility is suggested by Johns' working method: after applying the green paint, the small panel was closed, bringing the surface on top of the orange painted surface that allowed the wet paint to drip on both panels.

In the catalogue of *Leo Castelli - Ten Years*, *Untitled* is represented in black and white with the orange panel closed. This depiction may have been a deliberate choice made in agreement with the artist. Johns' world of images is not fixed. For the *Retrospective of Jasper Johns* in The Museum of Modern Art, New York 1996, the work *According to What* (1964) is represented in the catalogue

Table 1. Dimensions of the composition

	h x w (inches)	H x w (cm)
Central part, without orange panel	72 x 168	182.9 x 427.0
Total construction	72 x 188	182.9 x 478.0
Blue, Red, Yellow stretchers	72 x 48	182.9 x 121.9
Violet panel	24 x 72	61.0 x 182.9
Orange panel	20 x 20	51.0 x 51.0

Table 2. Analytical results of the paint analyses.¹

Sample	EDX	XRD	FTIR	DTMS, GCMS ²	Conclusions
White priming	Pb, Ca, Ba, S		Oil, chalk, lead white		Lead white, chalk and barium sulphate in oil
Yellow	Cd, S, Al, Ba, Zn (Mg, Cl)	Cadmium zinc sulphide, zinc oxide	Oil, barium sulphate and magnesium carbonate.	Drying oil: P/S 2.5, P/S 1.5, Cd, S	Cadmium (zinc) yellow, zinc white and barium sulphate (and/or lithopone), magnesium carbonate and aluminium compound(s) in oil.
Blue	Al, Na, Si, Ba, Pb, S, Ti, Co (Fe, P, Ca, K, Mg, Cl)	Quartz, hydrocerussite, cobalt oxide (CoCo ₂ O ₄), titanium dioxide (anatase), sodalite, calcite	Oil and magnesium carbonate	Drying oil: P/S 2.0, P/S 1.6	Cobalt blue, sodalite and/or French ultramarine, lead white, titanium dioxide (anatase), barium sulphate, magnesium carbonate, quartz, calcite in oil.
Red	Cd, Se, Al, Fe, Ba (Zn, As, Pb, Mg)	Cadmium selenium sulphide, barium sulphate, magnesium carbonate	Oil, barium sulphate, magnesium carbonate	Drying oil P/S 1.8, P/S 2.0, Cd, S	Cadmium red, red iron oxide, barium sulphate, magnesium carbonate, unidentified aluminium compound(s) in oil.
Trans-parent yellow ³				Strongly heat bodied oil. P/S 1.6	Un-pigmented (strongly heat bodied) stand oil.
Orange	Cd, S, Si, Ba (Al, Mg)	Barium sulphate, cadmium sulphide, quartz, magnesium carbonate			Cadmium sulphide orange, quartz, barium sulphate. unidentified Al & Mg compound(s).
Green	Cr, Si, Cl (Al, Ba, S, Zn)				Viridian, quartz, barium sulphate, unidentified Zn & Al compound(s).
Purple	S, Zn, Br, Co, P Ba (Al, Mg)	Barium sulphate, cobalt arsenate		Heat bodied oil	Cobalt violet, red lake containing Br, barium sulphate, unidentified Al & Mg compound(s).
Surface entities	Al, Mg				unidentified Al & Mg compound(s) ⁴

¹ Samples were analysed with Scanning Electron Microscopy (SEM), coupled with energy dispersive X-ray spectroscopy (EDX) and studied with Light Microscopy and EDX in cross-section, at the Courtauld Institute of Art/University of London, unless stated otherwise. X-ray diffraction (XRD), Gas-chromatography with mass-spectrometry (GCMS) and Fourier Transform infrared spectroscopy (FTIR) were carried out at ICN, Direct temperature-resolved mass spectrometry (DTMS) was done at Shell Research and Technology Centre, Amsterdam. See for experimental details e.g. A. Burnstock, K.J. van den Berg and J. House, 'Painting techniques of Pierre-Auguste Renoir: 1868-1919', *ArtMatters*, 3 (2005), 47-65.

² Heat bodied or stand oil interpreted on the basis of DTMS results. GCMS result in *italics*. See text for discussion.

³ Taken from turnover edge of yellow panel.

⁴ Based on analysis results of bulk of paints. See text.



with its small panel on the lower left closed, while in the exhibition, the painting was hung with the panel open.¹⁴

Dimensions and stretchers; Canvas and Priming

Dimensions and stretchers

The panels follow a coherent system of dimensions. The exact measurements of each stretcher bar are recorded in pencil in handwriting (see Table 1).¹⁵ The precise measurements for the stretcher and canvas sizes were an important part of Johns' work, shown by the numerous notations and diagrams made in pencil on the back of the stretcher bars and the borders of the canvas (see Appendix B). The stretchers used for this work are all made from ordinary quality pine.¹⁶

If it would be possible to close the lateral panels as in a traditional triptych, there would be an overlap of 12 inches on both sides, which is the exact measure of the rulers incorporated into the work (see section *Organisation of Colour, Prints and Objects*).

There are a number of other works by Johns that measure 72 inches high, but all differ in width.¹⁷ The orange panel of *Untitled, 1964-'65* is different to the others. Here the canvas is stretched onto a 20-inch ready-made stretcher from Anco Bilt Glendale (blind stamp pressed in the wood, fig. 2).¹⁸ The tacking margins are regular and positioned vertically along all the borders of the five panels.

In 2005, Johns had no clear recollection of where he obtained his stretchers, canvas and painting materials. With regard to the origin of the stretchers used for *Untitled, 1964-'65* Johns stated: 'Most of my stretchers are made by Lebrun in New York, but these may have come from another source.'¹⁹

In the 1960s there were several well known art supply shops in Manhattan who delivered these materials manufactured in standard sizes or custom made.²⁰ Art suppliers helped the artists with mounting the canvas onto the

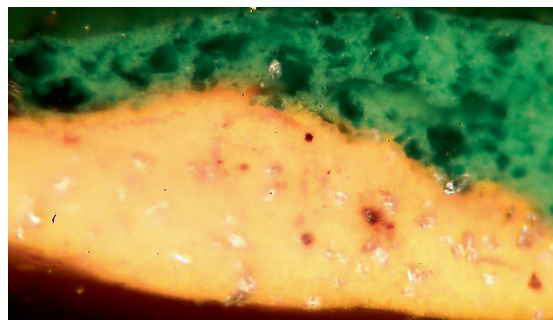


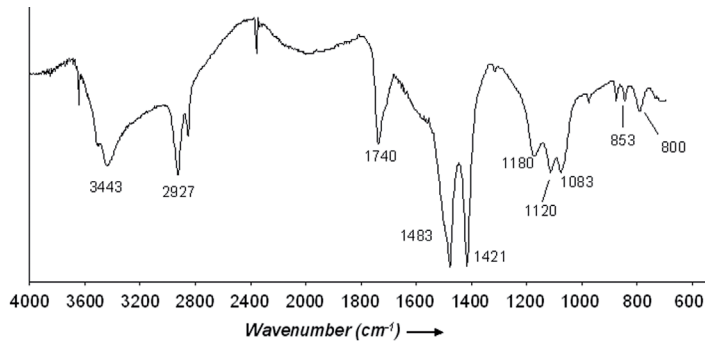
Fig. 2 Stamp of supplier Anco Bilt Glendale

Fig. 3 Stamps in black on the inner side of the HERGA fabric

Fig. 4 WINSOR & NEWTON stamp H 209 marking the borders of the linen of the blue and red panels

Fig. 5 Cross-section of green paint, showing quartz particles present





< Fig. 6 FT-IR spectrum of the red paint, indicating magnesium carbonate, barium sulphate and calcite

Fig. 7 DTMS spectrum of the yellow paint, indicating a linseed oil (P/S = 1.5). No evidence for wax, which could have been an indication for encaustic techniques, nor for dammar (see text)

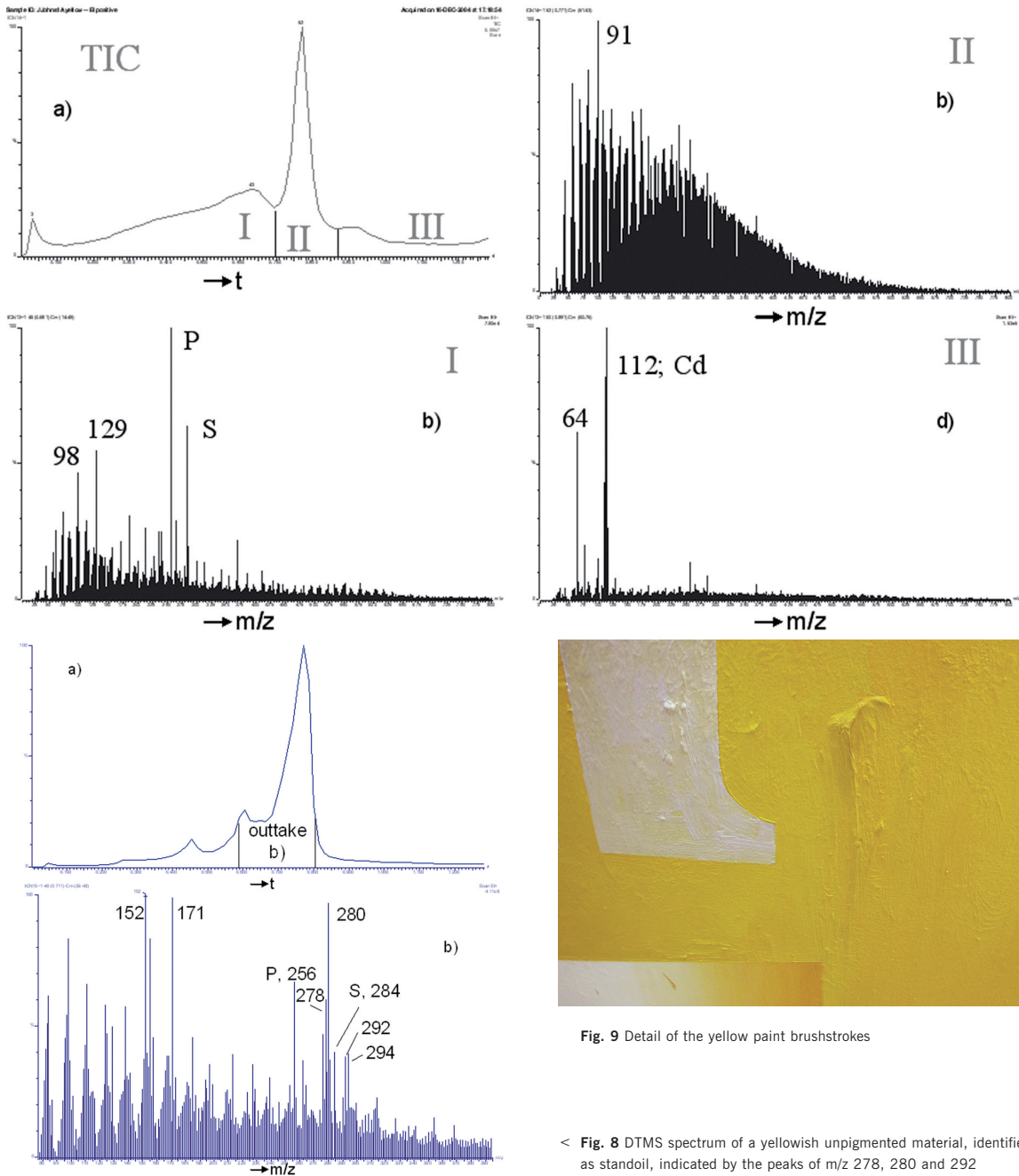


Fig. 9 Detail of the yellow paint brushstrokes

< Fig. 8 DTMS spectrum of a yellowish unpigmented material, identified as standoil, indicated by the peaks of m/z 278, 280 and 292

stretchers in their studios. A recent account by the well-known Lou Rosenthal (born in 1914), describes how he worked for: 'all those artists including Jasper Johns'. Not only did he help the young artists with technical problems, 'because in the beginning they didn't know how to do it'. He 'helped them financially with funds'. He delivered Johns oils, canvas, paper and brushes.²¹ It is clear that Johns hardly used complete, ready-made canvas supports but ordered them in the desired size.²²

Canvas and priming

With the exception of the violet panel, the canvases are of fine quality,²³ commercially primed and mounted on the stretchers. The canvases were attached with staples oriented vertically at regular intervals on the turnover edges and irregularly on the reverse. The selvage side of the canvas shows stamps from Winsor and Newton (W&N).²⁴

The painting was made in the same year that the recipe for the preparation layers used by W&N changed, and this provides a combination of documentary and physical evidence for precise dating of the work. The canvases were manufactured double primed, 72 inches in height, which is just equal to the longer side of the three larger panels. Indeed, the blue canvas has selvage edges on top and bottom, indicating that the whole canvas was likely to be 183 cm width.²⁵ Analysis of the priming from the yellow panel of *Untitled, 1964-'65*²⁶ indicated that the white material used by W&N comprises a mixture of lead carbonate, chalk and barium sulphate. This is consistent with W&N's priming recipe used between 1954 and 1964.²⁷ The canvas of the violet panel is clearly of another quality. The fabric is rougher and thicker and comprises no stamps or marks that might provide evidence for its origin.

Paint, painting technique and condition

Text descriptions of *Untitled* define the medium as oil on canvas with objects. The smell of volatile low molecular weight degradation products from drying oil can still be detected at close distance. Analysis of the paint samples taken from *Untitled* showed that all paints were bound in drying oil (see Table 2). The unexpected water sensitivity of the paint in the surface cleaning tests raised questions about the composition of the paint.

The palette used for *Untitled* includes cadmium zinc sulphide yellow, cadmium selenium sulphide red, cobalt oxide blue and french ultramarine, cobalt violet, viridian, with lead white and titanium white. The pigments were combined with white materials such as barium sulphate, magnesium carbonate and calcite that were commonly

added as extenders.²⁸ The presence of Titanium white in its anatase form is noteworthy since it is unstable and may influence deterioration of the blue paint. It was used less frequently after WW II, when titanium dioxide in its more stable form rutile became available.²⁹

Elemental analysis of all paints showed a significant aluminium content (partly assigned to be aluminium oxide), which could be linked to the presence of aluminium stearate. Fatty acid salts such as aluminium stearates were used as an emulsifying agent in the manufacture of the paint, its function was mainly to keep the finely ground pigments divided and dispersed in the medium.

Metal 'stearates' influence the organic analysis of the oil media, since the organic components are similar.³⁰ Neither FTIR spectroscopy nor XRD could confirm the presence of these stearates. Alternatively, the aluminium content could be explained by hydrated alumina, which was added to paints as an extender.³¹ However, this material was not identified using FTIR.

Light microscopy, FTIR and EDX analysis confirmed the presence of various other extenders such as quartz (fig. 5), magnesium carbonate, barium sulphate and calcite (fig. 6). There are no reliable accounts that state which proprietary oil paints were used by Johns although it might be reasonable to suggest that since Johns used commercially primed W&N canvases, he might have used oil paints from the same manufacturer. In his letter, Johns remembered that he used 'W&N or, possibly, Utrecht. Most often I have used a mixture of turpentine, Stand oil and dammar varnish. I think that it would have been ordered from Rosenthal (...).'³²

Tubes of oil paint from Winsor & Newton were identified in a photograph published in 1988 showing Johns in his studio on Upper East Side.³³ Analysis of a set of oil paints from this same manufacturer from circa 1970 and 1971, identified materials quite similar to those found in our analysis of Johns' palette for *Untitled*. For example, a tube of cadmium yellow paint was found to contain the same pigment, oil medium and magnesium carbonate, barium sulphate and aluminium in similar proportions.³⁴

A number of publications and catalogues include images and accounts of Johns' studio and practice, including his typical use of encaustic media. Documentary film footage shows the artist heating paint squeezed from tubes and applying the paint still warm to the canvas, although in the present study no evidence has been found for the use of encaustic media for *Untitled* (fig. 7). Information about Johns' working methods, and the use of paints and their application can be derived from Ugo Mulas's series of pho-

tographs of Johns in his studio in Edisto Beach in 1965, which captures the making of *Untitled*. *Untitled* is still hanging on a long wall.³⁵ The painting appears to be finished apart from the orange panel that is not yet attached. At the right side of the work there is a small table with tins containing brushes that may contain paint used for the polyptych. Johns may have used the tins to mix proprietary paint with other materials such as stand oil and/or dammar varnish. The addition of dammar, as mentioned by Johns could not be confirmed.³⁶ Stand oil could not be detected in the paints with the possible exception of the purple paint, which contained some quantities of heat-bodied oil. Interestingly, on the reverse of the yellow panel, yellowish, unpigmented material was found which was identified as stand oil (fig. 8). This may have been applied for a purpose that is not clear.

Johns applied the paint using a largely traditional technique that creates a velvety smooth surface, with selected areas of visible strokes to produce lively texture (fig. 9).

It was not unusual for Johns to spend two years on a single canvas: '...the painting tended to be a sum of corrections in terms of painting, in terms of strokes. So that there are many, many strokes and everything is built up on a very simple frame but there is a great deal of work in it, and the work tends to correct what lies underneath constantly until finally you quit and say "It's this one".'³⁷ This view of his working methods contrasts with the technical evidence from paint cross-sections of samples taken from *Untitled*, which suggests that only one or possibly two paint layers were applied to the areas of single coloured painting.

The paint surface of *Untitled* is in good overall condition, with the exception of drying cracks in the black paint used to fill in the three circles made by the imprint of the bottom of a round tin. The orange panel exhibits an overall pattern of a combination of drying and mechanical cracks, which is augmented by stretcher bar edge cracks. The cause of the cracking is generally linked with stress cracking in underlying materials, including the non-typical coarse canvases and priming.

Examination of the paint surface by eye and under low magnification (x40) illustrates a milky appearance of the paint, which may be associated to breakdown products of the medium, or an additive that has separated from the original homogeneous mixture. This phenomenon may be associated with the presence of aluminium and magnesium salts on the paint surface, the source of the former perhaps being hydrolysed aluminium stearate.³⁸ The

resulting product may be responsible for the exceptional water sensitivity.³⁹

Organisation of colour, prints and objects

Untitled is a carefully organised work that can be read from any direction and in which the spectator can follow a number of visual signs.

The importance of colour is paramount. The work can be viewed as a multiplication of monochromes, with contrasting areas of colour. Johns was not afraid to use the three primary colours blue, red and yellow, with the three secondary colours orange, green and violet. This painting may have inspired Barnett Newman's *Who's Afraid of Red, Yellow and Blue* (series I – IV), painted in 1966-1967.⁴⁰

Colour is used for the capital letters of the name of the three primary colours, as an abbreviation or suggestion of the sound of the word. Johns restricted himself to the three primary colours and the alphabet. 'Anyhow I am interested in measuring the size of things and naming them'.⁴¹ The representation of the complete word of the colour is not necessary for the spectator, as they prompt the viewer's innate knowledge of the word. The letters are part of the primary construction of the composition (fig. 10).⁴²

The notion of colour is underlined by the triple presentation of non-identical rainbows. There are three repetitions of the colours of the spectrum around a white centre, three grey scales at the edges of the panels, and three black circles, that are reminiscent of the colour scales used in printing like in *According to What* (1964). The initial letters of the three primary colours are painted in grey tones.

In addition to the orderly planning of the composition and his strongly individual application of the paint, Johns offers very personal marks. These include the impression of his right hand twice in black paint and the print of his own face in the rectangular surface on the right yellow panel and partially on the blue panel. The repetition of this construction in the painting is identical (fig. 11).

The series of photographs taken by Ugo Mulas in Johns' studio show the technique of 'face-printing'. In the image Johns uses his face primed with oil paint as a method of applying paint to paper, and then applies charcoal to the oil stain.⁴³ He starts this movement with the back of his head against the paper and finishes with the right ear side of his face, turning clockwise. This subject fascinated him from the early sixties.⁴⁴ 'All these applications of his own body were symptomatic of the more exposed, emotional, and presumably autobiographical aspect of Johns' art in this period.'⁴⁵ *Untitled*, 1964-'65



Fig. 10 Letters on the upper edge of the blue panel



Fig. 11 Detail of Johns' hand and head imprints



Fig. 12 Detail of the ruler on the left border of the yellow canvas



Fig. 13 Detail of the rainbow



Fig. 14 Stamp with Johns' 'signature' behind the hinged ruler



Fig. 15 Example of an inscription on a stretcher bar of its size

might be the only painting on which we find a print of his head, while prints of his hands are seen in a large number of his paintings.

The base of a jar of paint or solvent is also printed, giving the outlines of a square, with rounded corners or perfect circles. He learnt this trick from Rauschenberg. 'He [Rauschenberg] having discarded his brush, simply dipped the top of a jar into paint and then printed it onto the fabric.'⁴⁶

The painting is completed by the application of ordinary but significantly chosen objects: a broom and three rulers. Between 1961 and 1964 Johns used attached or hanging household objects - kitchen utensils, cups, brooms - or artist's devices - rulers, paintbrushes, rags, small hinged canvases. In these works, it is not the identity of the objects but the nature of their relationships that counts. 'Jasper Johns was strongly affected by the elevation of the common object to the level of the work of art as pioneered by Duchamp.'⁴⁷ The broom is fixed with a pin at a single point at the extreme right side of the yellow right panel. The broom is a very common type available in United States, and it is evident that it has been used to sweep the floor.⁴⁸

The main panels are visually extended to the left by the small orange panel and to the right by the broom, which extends over the edge of the panel. The broom is fixed, but its hypothetical movement is shown in contrasting white, in a single brush stroke that forms the circular movement of the rainbow.

Robert Rauschenberg also incorporated a broom in his *freestanding combine, The Tower* (1957).⁴⁹ In this work, the broom is standing upright straight and its brush end is sprayed using pink, yellow, green and yellow fluorescent paint like a flag. In *Untitled, 1964-'65* the ready-made object functions both as a broom and provides an indication of circular movement.

Untitled, 1964-'65 features three identical wooden rulers, 12 inches (one foot) in length. Two rulers are fixed close to the border with a screw, and the third one, fixed on the left border of the yellow canvas, can be turned around 180 degrees (fig. 12).⁵⁰ This element may make a reference to a lateral panel of a triptych, while it also refers to the circular form of the rainbow, the rotating broom and the turning movement of the head. These features may have developed from the early target paintings from the late 1950s. The wooden rulers are also important as an iconographic element in Johns work, relating to his interest in the idea of measurement and notions of quantification.⁵¹ Rulers, whole or parts of them, are included in other paintings by

Johns, sometimes applied up side down, or replaced by an ordinary piece of wood or stretcher bar.⁵² The first measuring devices appeared as subjects in Johns' work in *False Start* (1959), at the same time as he began to feature the convention of names for colours.⁵³

In addition to its iconographic meaning, the ruler has a practical purpose as a working tool.⁵⁴ In *Untitled, 1964-'65*, the three rulers indicate the painted circle by scraping the surface of the paint layer (fig. 13). The length of the three standard rulers gives the width of the three non-identical rainbows, the height of the letters and the overlap of the lateral panels. The rainbows appear to have been made with a ruler, although there are no traces of paint to confirm this. Johns has painted the image of the rulers precisely, including numbers and divisions in black paint or ink on a light ochre-coloured base.

Johns very often used rulers to indicate his fascination for dimensions and proportions. In recent correspondence with the artist, he commented that: 'I do remember making the painting in my studio at Edisto Beach, South Carolina. An elaborate system of 'rules' helped determine the composition (...)'⁵⁵

Behind the hinged ruler *JOHNS* (1964-65) is stamped in black (fig. 14). This small feature is only visible on close inspection, which reflects Johns' intention to invite the viewer close to this large work and discover its hidden secrets. Johns continued to use this device in later works.⁵⁶

In an interview Johns is asked if he has any particular recollection of his painting at the Stedelijk Museum in Amsterdam, *Untitled, 1964-'65*. He answered: 'I remember that in that painting two or three elements move from panel to panel according to a pictorial system. When I looked at a reproduction recently, I tried to rediscover that system, but I haven't succeeded yet. When I made the painting I thought it would be obvious to everyone.'⁵⁷ Originally, the hinged ruler was fixed haphazardly on the side of the yellow canvas with two non equal screws. Since Johns was a perfectionist, alternatively, the objects may have been attached by a studio assistant.⁵⁸ During the installation of *Untitled, 1964-'65* for the retrospective of this work at the Museum of Modern Art in New York in 1996, Johns himself carried out the necessary conservation work fixing the ruler by introducing two small pieces of wood in the holes of the screws. He also insisted that the ruler needed to be on display with a space between it and the paint surface.⁵⁹

Two photographs of Johns working on a nearly finished *Untitled*⁶⁰ can be used to interpret the artist's intentions

for the display of the finished work. They show the artist kneeling on the left side of the hinged blue panel, with the orange panel in his hands, in the process of positioning it. The yellow and the blue panels are standing nearly finished, against the wall, without the wooden ruler but with its painted representation. The violet panel stands on its side, ready to be put together with the others. The second large image shows the panels all fixed together, hanging on the wall, with the rulers and the broom in place. Johns is captured in the act of measuring with a 12-inch ruler, the vertical bar of the inverted B painted on the yellow panel.

Johns then applied blue paint over the hinged orange panel to create a link before applying the green paint. Detail was important to Johns and the extension of the paint layer over the turnover edges, here applied in the final stage after the joining of the panels, reflects Johns' intention to view the object in three dimensions.

The absence of edge paint on the top and bottom of the panels may relate to the size of the work and the average height of the viewer.

Conclusion

The examination and technical study of Johns' *Untitled, 1964-65* and associated documents and photographs, combined with information supplied by the artist helps us to understand his materials, working methods and intentions for display of the large-scale three dimensional works he produced.

The study offers a contemporary analysis of the meaning of the work in the context of traditional iconography of the Triptych format. The relation between the members

of the triptych is exact, as evidenced by the physical construction of the work that was clearly precise and deliberate in both materials and process.

The attempt at surface cleaning the painting prompted an investigation of the composition of the paints used for the work, as they showed a sensitivity to water that would not be expected for oil media aged for more than 40 years. Although the analysis of the paint medium suggests that traditional oil paint was used, the sensitivity or solubility of modern oil paintings from the 50s and 60s is a phenomenon that is more widely recognised by conservators and deserves further study. Information about the manufacture of oil paint in the middle of the twentieth century should follow, and this may provide evidence for the solubility of the paint, that could in turn inform conservation practice.⁶¹

Johns seems to have a particular liking for this painting. In an interview the artist was asked if there was an artwork in the show at the Whitney Museum he would be particularly happy to see again. He answered: 'I'll be happy to see the pictures I haven't seen in a long time. The big [1964-65] untitled picture that's been in Amsterdam.'⁶²

Acknowledgements

Jasper Johns, New York
Sarah Taggart, J. Johns office, Sharon, Connecticut,
Roberta Bernstein, preparing Johns' catalogue raisonné, University Albany, New York,
Michael Duffy, painting conservation of The Museum of Modern Art, New York and Carol Mancusi-Ungaro, painting conservation of the Whitney Museum of American Art, New York.
Suzan de Groot, Peter Hallebeek en Henk van Keulen, Netherlands Institute for Cultural Heritage, Amsterdam; Wim Genuit, Shell Research and Technology Centre, Amsterdam.

Notes

1 A. Burnstock, K.J. van den Berg, S. de Groot, L. Wijnberg, *An Investigation of water sensitive oil paints in 20th Century paintings*, presented at *Modern Paints Uncovered*, Symposium, May 16-19, 2006, Tate Modern, London. Postprints to be published summer 2007.
2 Jasper Johns was so kind to answer our question in a letter (December 1st, 2005), via Sara Taggart.
3 Stedelijk Museum, Jasper Johns (1930), *Untitled, 1964-65*; Publication: *Op het tweede gezicht*, (March 1983), 119-122C; F. Keers, 'Untitled. Jasper Johns (geb. 1930)', *Openbaar Kunstbezit*, 14 (1970), 26 -

was translated in English; C. Blotkamp, 'Het Detail. Jasper Johns', *Kunstschrift*, 4 (1997), 6-7; C. Blotkamp, 'De werkplaats Ugo Mulas fotografeert Jasper Johns', *Kunstschrift*, 4 (1994), 52-54; R. Schenk, 'Let It Be. Luisteren naar *Untitled (1964-1965)* van Jasper Johns', *Jong Holland*, 14, no.1 (1998); R. Schenk, *US in NL. Amerikaanse Kunst in Nederlandse Musea 1945-2002*, [exh. cat. Centraal Museum Utrecht], (Utrecht, 2004), 44-5.
4 In 1961, Johns bought a house in Edisto Beach, on Edisto Island south of Charleston, where he spent from spring to fall of each year, then spent the winter in NY. In: K. Varnedoe, *Jasper Johns: a retrospective*; with an essay by Roberta

Bernstein, [exh.cat. Museum of Modern Art, New York], (New York, 1996), 192.
5 K. Varnedoe ed., *Jasper Johns: Writings, Sketchbook notes, Interviews*, (Museum of Modern Art, New York, 1996), 104.
6 In 1957 Castelli opened a gallery devoted to avant-garde art, located at 4 East 77th street New York. Now the gallery is at number 18, directed by Barbara Berettozzi Castelli and still presenting Johns' work.
7 Johns first solo exhibition in 1958, *Jasper Johns: Paintings*, was a great success and his works nearly sold out.
8 Leo Castelli Gallery, 'Jasper Johns': *Leo Castelli-Ten Years*, [exhibition

- catalogue] (New York, 1967), *Illustration Untitled* (1964-65).
- 9** The museum archives contain documents relating to the acquisition of this work, for the price of \$38,000. Letter SM no. 50486. Letter SM no. 51341 and letter dated 22 February 1966. Letter SM no. 51673. **10** Letter SM no. 51673.
- 11** Notably by Jackson Pollock, exemplified by his *Triptych* no. 24, 25, 29 (1949) where the name triptych is still used, and by Mark Rothko for his triptychs in the Rothko Chapel (1965-67) in Houston, Texas. Other abstract interpretations are offered by the divided and repeated images made by e.g. Brice Marden, *Deliberate Greys for Jasper Johns* (1970), and Robert Ryman's *Triptyque* (1974).
- 12** He lived and worked from the summer of 1954 onwards in NY City, at Pearl Street, one floor below Rauschenberg.
- 13** Robert Rauschenberg, *Charlene*, 1954, Stedelijk Museum. See *Robert Rauschenberg: Combines*, P. Schimmel and L. Mark eds., [exh. cat. The Metropolitan Museum of Art, New York/ The Museum of Contemporary Art, Los Angeles] (Göttingen, 2006).
- 14** Michael Duffy, Museum of Modern Art, personal communication. Signature and title are written and printed at the backside of this little panel, visible when it is closed.
- 15** The measures are not of the hand of the artist. Lilian Tone, Assistant Curator at the Jasper Johns exhibition at MoMa, personal communication, confirmed by Johns in his letter (2005).
- 16** Bar sizes 6.6 cm and 2.2 cm.
- 17** *Figure 5* (1960) 72 x 54", *O through 9* (1960) h 72 x 54", *Fool's House* (1962) 72 x 36", *Two Flags* (1962) 98 x 72", *Field Painting* (1963-64) 72 x 36 —, *Wall Piece* (1968) 72 x 110 —. *Screen Piece 3* (1968) 72 x 50", *Decoy* (1971) 72 x 50", *Voice 2* (1968-71) each panel 72 x 50", *Untitled* (1972) four panels of each 72 x 48", *Scent* (1973-74) three panels of each 72 x 42", *Between the Clock and the Bed* (1981) 72 x 42", *Between the Clock and the Bed* (1981-83) 72 x 42".
- 18** Anco, Glendale, NY is no longer in business.
- 19** Johns, Letter 2005. Johns means James Lebron. See Appendix A for an overview of artists' materials suppliers. We found the same pencil indica-
- tions on stretcher bars of a work of Noland in the collection of the Stedelijk Museum.
- 20** The shorter ones were made in every possible size and in even inches for the longer ones.
- 21** Lou Rosenthal, personal communication, 2006. For Rosenthal's, see Appendix A.
- 22** For some other works they were customised by fixing a supplementary bar in one direction or for the special hinged panels included in canvases like *Highway* (1959) and *By the Sea* (1961), which are the 'expansion bolts ones' manufactured by Lebron in New York. James Lebron, see Appendix A.
- 23** As remembered by Rosenthal (2006): 'He was working on fine linen'. Thread count large panels: 17 x 23 threads per square cm.
- 24** Stamps in black on the inner side of the fabric 'HERGA' and 'WINSOR & NEWTON. Ltd. LONDON ENGLAND' (figs. 3-4). At irregular intervals a stamp 'H 207' marks the borders of the linen of the yellow panel. On the border of the shortest side of the red panel and three of the sides of the blue panel is a 'H 209' imprinted with a stamp (fig. 4). These stamps are always placed at the outside of the canvas and identify the canvas as a type sold by Winsor & Newton between 1950 and 1990. There are no publications on this subject, only catalogues. The knowledge given here by W&N is through experience (Winsor & Newton Technical Advice, letter, October 2005). See Appendix C.
- 25** This means theoretically that there is no space left for the borders. In reality the actual width of this fabric is about 192 cm including the borders. This difference may be due to the stretching of the canvas otherwise the information given is not coherent.
- 26** Using light microscopy and energy dispersive X-ray analysis (EDX).
- 27** See Appendix C.
- 28** A. Foster, May 2006, W&N, personal communication.
- 29** M. de Keijzer and P. Hallebeek, ICN, personal communication.
- 30** Metal stearates were commonly added to paints in the 1960s. They are normally not pure and contain palmitates, stearates and other compounds. E. Ordóñez and J. Twilley, 'Clarifying the Haze: Efflorescence on Works of Art', *Analytical Chemistry*, 69 (1997), 416A-422A. They are difficult to distinguish from drying oils and interfere with the mass spectrometric analysis of the oil medium. Analysis of a 1993 Al stearate (technical grade, British Drug Houses Ltd, ICN collection) gave a P/S ratio of 0.5.
- 31** R. Mayer, *The Artist's Handbook of Materials and Techniques*, (London, 1991), 184-187.
- 32** Johns, Letter 2005. Rosenthal (2006, see Appendix A) himself points out that in the 1960s W&N was expensive and considered as a top quality brand. Johns' present art supplier New York Central confirmed that he nowadays orders W&N oil paint and water-colours and a few 'Williamsburg' paints. Although some artists such as Rosenquist always ask for very precise colours, Johns is not so strict. Utrecht Art Supplies and Williamsburg, see Appendix A.
- 33** Solomon 1988.
- 34** Burnstock et al. 2007.
- 35** Varnedoe 1996, 227
- 36** The use of any significant quantities of dammar resin can be ruled out on the basis of our GCMS and DTMS analysis results.
- 37** Varnedoe 1996, 85.
- 38** Burnstock et al. 2007.
- 39** Winsor & Newton Technical Advice (letter, Oct. 2005) suggested that aluminium hydroxy sulphate was a typical in the 1960s. In the present study, this compound was not detected.
- 40** E. C. Baker, 'Barnett Newman in a New Light', *Art News*, 67, 10 (February, 1969), 60: 'Newman's recent interest in primaries might be seen partly as a slowly evolved response to the red-yellow-blue paintings of Jasper Johns; and his titling of three paintings *Who's Afraid of Red, Yellow and Blue...Who is Afraid of Red Yellow and Blue III*, 1966-'67 is in the collection of SMA.
- 41** Varnedoe 1996, 36.
- 42** The letters are cut in a line from the end of the ruler to the border 28.5 inches from the top of the ruler. This forms a triangle at the base of the rainbow.
- 43** Varnedoe 1996, 196-197. A series of black and white photographs: nos. 3-20.
- 44** *Study for the Skin I - IV*, 1962, charcoal on drawing paper.
- 45** Varnedoe 1996, 191.
- 46** Varnedoe 1996, 37.
- 47** Diane Waldman, *Collage, Assemblage, and the found object*, (London, 1992).
- 48** These brooms made of natural grasses are still available in the USA. The broom has to be taken off for travelling and mounted for display. In *Fool's House* (1962) we find a similar type of broom mounted on a canvas with the 'printed' words 'TOULS' and 'HOUSE' and even the word 'Broom' in Johns' handwriting on the canvas.
- 49** Collection Kate Ganz, New York/Los Angeles 2006 (see note 13).
- 50** Three identical flat wooden rulers of WESCOTT RULERS - length 12 inches, equal to one foot. This type of rulers of the same brand that every American remembers from elementary school is still available in the USA. An exhibition on the Westcott Ruler/Company was held in Seneca Falls Museum of Waterway and Industry, NY in 2006.
- 51** J. Johns commenting on the presence of rulers in his work. Varnedoe 1996, 36.
- 52** For example, *Painting with Ruler and "Gray"* (1960), includes a one yard ruler, and *Good time Charley* (1961) the first half of a 'One Yard's ruler. *Device* (1962) contains pieces of stretcher bar. *Passage* (1962), incorporates the end of a ruler applied upside down with the word 'RULER' in blue, printed by the artist. The same device is used for works on paper. For *Wilderness II* (1963) he uses a 12-inch Westcott Ruler, while *Space* (1970) includes a 12-inch Clark Coolidge ruler, under the work on the mount used in the same way as either a title or a measuring device.
- 53** Varnedoe 1996, 26.
- 54** Johns can be seen using rulers in several photographs. For *Diver* (1962), collection MoMa, he is working with a one-yard ruler from wood. Varnedoe 1996, 199. In a series of photographs by David Seidner, we see him working with a plastic triangular ruler and a T-square, on the major construction lines of his painting *Untitled*, 1992-'94 in his Connecticut studio in: L. Liebmann, *Artists at work: in the studio of today's most celebrated artists*, David Seidner, coordinator D. Edkins, (New York, 1999), 200. Johns has a very secure hand and draws numbers and letters in a free way. R. Bernstein and C. E. Foster, *Jasper Johns Number*, (The

Cleveland Museum of Art, 2003), end sheets.

55 Johns, Letter 2005.

56 Roberta Bernstein, personal communication.

57 Varnedoe 1996, 213.

58 'I have had assistants off and on over the years. I don't remember if there was one with me when I worked on this painting,' Johns, Letter 2005. David Whitney was Johns' assistant from 1966-1969, and Billy Klüver helped him on electrical installations. Varnedoe 1996, 229.

59 As the holes were too large, remedial treatment was carried out years later by the Stedelijk Museum carpenter.

60 Ugo Mulas (Photographs), Alan Solomon (Text), Michele Provinciali (Design), *New York: The New Art Scene*, (Canada, 1967), 153: '... in the past several years he has divided his time between the penthouse overlooking the Hudson river in New York, and a house and studio at Edisto, South Carolina, a remote beach town on an island in the Atlantic. The house and its contents were totally destroyed by a recent fire while Johns was travelling in Japan; consequently, the pictures of Edisto in this book comprise what is virtually the only record of the place where Johns did much of his work of the past few years...'

61 Burnstock et al. 2007.

62 Varnedoe 1996, 162. Interview in 1977 on the occasion of Johns' retrospective at the Whitney Museum of American Art.

63 We find this identical scheme of a stretcher also on the stretcher bars of Noland's *Trans West*, (1965), Stedelijk Museum.

Appendix

A. Artists' materials suppliers

• **James Lebron** (76), celebrated New York art handler who also made painting stretchers for artists ranging from Roy Lichtenstein to Francesco Clemente, died on March 16 2005 in West Islip, N.Y. Lebron's clients included many of the Color Field' painters as well as the Metropolitan Museum and collectors like S.I. Newhouse.' www.ArtNews.com. He worked for Louis, Noland, Kelly as a technician, adviser and 'mover' (folding, rolling) etc. Michael Duffy, MoMa, personal communication

• Rosenthal's since 1896, 840 Broadway, N.Y.C. At one time, Rosenthal ran eighteen branches of his business and he went once a week to the Copper Union School nearby to teach artist materials' use. In Rosenthal's Art Supply shop single short stretcher bars were manufactured, longer ones were ordered specially. On each bar the length was specified by a stamp. Two assistants worked with various artists in their studios. The main commercial supplier was Anco. Lou Rosenthal, personal communication by telephone, 17 January 2006.

• New York Central Art Supply 1905-2005, 62 Third Ave. (Near 11th St.) was founded by Harold Steinberg. The East and West Villages were populated with artists who would in time change the course of modern art. Demand for quality art supplies increased. Technology offered new resources and choices for the artist. New York Central and Rosenthal's Art Supply were just around the corner. In the 1970s and 1980s as Harold's son Steven Steinberg, worked closely with many of the most respected artist's. With Lou Rosenthal now as integral part of the staff. Steve (72) and his sister Marcia are still running the business standing for the newest technology and old standards.

• Utrecht Art Supplies was founded in 1949 in New Utrecht, Brooklyn, by two brothers. They began the Company as 'Utrecht Linens' importing fine Belgium artists' linen made to their specifications and from there grew to an international reputation for importing the finest Belgium linens. In 1957 they developed Utrecht 'Acrylic' Gesso and soon after were one of the first manufacturers of

professional acrylics for artist use. They were also one of the first Companies to promote cotton as an artists' canvas in conjunction with the acrylic gesso, and were active in teaching working artists how to stretch and prepare their own canvases. In the early 60s they developed their own line of professional oil paints. And went on to sell other manufacturers professional quality products at a discount (functioned as a mail order company for the USA). Eventually opening their first retail outlet in 1966 on Third Avenue and in the early 70s relocated to the present location on 4th Avenue. Pretty much every major New York City artist had come through these doors during the 60s and continues to do so to this day.

Robert Saaf, store manager. Utrecht Art Supplies, 111 Fourth Avenue, New York, Personal information, March 2006.

• **Williamsburg**, Handmade oils take their name from the Williamsburg section of Brooklyn, NY, where they were first developed in the late 1980's by Carl Plansky for his own use. NY Central Art Supplies, catalogue 2005.

B. Inscriptions on stretcher bars

On the stretcher bars of the yellow, red and blue painting 48/72 is recorded, with a drawing of a small stretcher (fig. 15).⁶³ This notation is always positioned at the same place - at the inner short side - close (10 to 16 cm) to one of the ends of the stretcher bars. The three identical stretchers have each a middle bar marked 48 above 72 at one side. On the wooden bars of the violet panel is written 23 7/8 (= 60.6 cm) above 71 7/8 (= 182.6 cm). Two stripes and a little panel drawing are included below, with two middle bars as seen in the finished work. The thickness of the canvases between the two fixed panels is even included in advance, to get the final total height at a perfect 72 inches.

In addition to the marks on the stretcher bars, 47 3/10 at the right side and 23 1/2 on the left side of the yellow panel, is written with pencil on the white prepared borders of the linen. It refers to the precise size of both sides of the red and violet panel that was attached on the right side. Further pencil inscriptions were made in the folds of the

right upper corner of the violet canvas seen from the reverse: 48/72 J. Johns, and the simplified drawing of the stretcher construction.

• **C. Winsor & Newton Technical Advice** on the manufacture of the canvases used by J. Johns, London, October 2005:

The quality of the canvas is Irish Linen. Herga comes from a local Harrow name. This quality of linen was fabricated around 1955 - 90 by W&N in the main manufacturing site Harrow, England. The fabric was stretched on a priming frame for priming, not on the stretcher.

They were always sized with rabbit skin glue;
1954 - 64 1st Coat-Lead White in Linseed Oil;
2nd Coat-Stack Lead in Linseed Oil (medium stain);
1964 - 78 1st Coat-medium stain
2nd Coat-Titanium White in alkylid.

The size of the original fabric before cutting it was either 72 inches (183 cm) or 108 inches (274 cm). The stamps H207 and 209 can be read as follows: The letter is the person who stretched the linen and the numbers are the date code. They were applied by hand. These stamps are consistent with the 1960s.

The prepared fabric was sold on ready made frames or by the meter. The largest standard size of prestretched canvas in the Herga range was 60 inches x 40 inches. The largest size of standard stretcher frame the Herga range was also 60 inches x 40 inches. The premade stretcher frame pieces available in the catalogue also only go up to 60 inches. Winsor and Newton did make stretcher frames to order. It is most likely that some of the 72 inch role has been stretched on either a custom made Winsor & Newton stretcher or a stretcher that has been constructed by someone else.

The fabric was sold in the U.S.A.