

# The conservation and display of comic books

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*In October 2006 the State Library of Victoria (SLV) presented an exhibition of Australian comics, Heroes and Villains. The exhibition included comic books dating from the 1940s to present day, as well as some original art works and objects, numbering 294 items in total.*

*The treatment and exhibition of comic book collections raised some interesting issues for SLV's conservators and exhibition managers. While many of the comics to be displayed were in pristine condition, many others suffered from distortion, rusted staples, torn pages, damaged spines and extensive staining and foxing. The comic book industry has very definite ideas about what treatments are appropriate in order for a comic to retain its commercial value, including many that conservators would consider fairly routine, uncontroversial and even value-raising.*

*While SLV wanted to maintain the commercial value of its collections, practical considerations made some treatment inevitable. The comics needed to be displayed safely, without incurring further damage, and made stable for future use by library patrons. This paper will discuss the results of research undertaken to determine appropriate approaches to the conservation of comic book collections.*

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## INTRODUCTION

Printed on poor quality papers with fugitive inks, comic books are perhaps the ultimate in ephemera. Originally intended as fleeting, disposable entertainment, comic books became highly collectible during the twentieth century. Collectors now want their comic book collections to last for ever.

The State Library of Victoria exhibition *Heroes and Villains – Australian comics and their creators* entailed extensive conservation treatment of comic books dating from the 1930s to present day. Research was carried out in order to gain an understanding of the comic book industry within Australia and overseas, in terms of both the history of comic book production and current approaches to conservation treatment amongst collectors. The US, in particular, has developed a huge industry to service collectors, encompassing specialist conservators and restorers, independent "grading" companies who assign condition-based values to comic books, specialist suppliers of storage enclosures, publishers of various guides and magazines, and internet discussion groups.

Though informed in part by conservation principles, this industry has developed quite different ideas about what kind of conservation treatments are acceptable for comic book collections and a variety

of definitions for terms such as conservation and restoration. Conflict exists between the industry-assigned commercial value of a comic and the collector's desire for longevity. It became apparent that there is a need for professional conservators to communicate more closely with the industry, in order to educate collectors about deterioration mechanisms and the effects of various treatments. Discussions pertaining to professional ethics, particularly in regard to the proper documentation of treatments, are also of paramount importance. This paper will examine the issues, illustrated by the treatment and display of items from *Heroes and Villains*.

## THE EXHIBITION

*Heroes and Villains* was curated by SLV guest curator Kevin Patrick and presented an overview of comic books written, drawn and published by Australians. The exhibition did not contain any popular American titles, such as Superman; of all the characters represented in the exhibition, only the Phantom and Ginger Meggs would have been household names to the average Australian audience. To prepare for the exhibition, Conservation staff members completed incoming condition reports for borrowed items, determined appropriate display methods, performed stabilisation treatments and constructed display supports for 294 items. Conservation was also integral to the installation and de-installation of the exhibition.

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## AUSTRALIAN COMIC BOOKS

As in North America, the precursors to the modern Australian comic book were serial comic strips appearing in newspapers during the 1920s–1930s. The first comic “books” to be published were reprints of successful newspaper strips, such as *The Sunbeams Book* starring Ginger Meggs. Gradually, however, comic books evolved into a vehicle for original material (Dowd 2004: 17; Patrick 2006). World War II triggered a surge within the home-grown comic book industry, due to the government ban placed on imported American comics and other printed material in order to preserve local currency reserves for the war effort. To supply demand, publishers began to commission stories from Australian writers and artists. Wartime regulations also prevented publishers from launching new ongoing periodicals; instead publishers produced “one-shot” comics, supposedly featuring contained stories but often continuing characters and storylines from title to title. The materials available to create these wartime comics were limited, as newsprint was rationed and printing inks were in short supply. Consequently, publishers experimented with different formats and styles, such as two-tone colouring, printing on greaseproof paper, and smaller “digest-sized” or “pocket-sized” editions. (Patrick 2006; Foster 1998: 15; Bentley and Stone 1998: 137; Stone 1998: 147).

The boom continued after the end of World War II. The bans on new continuing titles were lifted and printing materials became more easily available, while the ban on imported American comics remained. However, by the late 1940s, Australian publishers had found ways to circumvent the ban on US titles, by receiving printers proofs, photographs or newspaper ‘tear sheets’ that featured all the art work they needed to print the material locally. American comics printed this way included the popular *Superman*, first published in Australia in 1947. Despite a few home-grown successes such as *Captain Atom* and *The Phantom Ranger*, the publication of Australian-made comics gradually declined. Those that flourished were usually heavily influenced by their American counterparts – for example, publishers insisted that *Captain Justice*, originally intended to be set during the Australian gold rush, was changed to an American Wild West setting. (Patrick 2006; Foster 1998: 15).

Censorship and television further affected sales during the 1950s and 1960s. The underground “comix” culture of the 1970s saw a resurgence of the industry, until the development of computer games and other new forms of entertainment in the mid 1990s caused another decline in sales. However, there are recent signs of revival, with artists finding publishing outlets in children’s magazines such as *K-Zone*, and by using the internet to publish and promote their work. The increasing popularity of Japanese *manga* and anime has also helped to revive the Australian comic book industry. (Patrick 2006). Despite many people still associating comics with “children’s art” (Glass 2004: 7), comic books undoubtedly have an adult market

and are being considered as an art form in their own right, appearing in ever-increasing numbers in library and art collections around the world. (CW 2004: 9–10).

## WHAT IS A COMIC BOOK?

Today the term “comic book” encompasses a variety of formats, ranging from those produced by large mainstream comic book companies like Marvel and DC to avant-garde, small print run comics produced by a single person. What all comic books have in common, however, is that the story is conceived as “... [an] inextricable braiding of image and narrative” (Chabon 2000: 362).

A comic book usually takes the form of a pamphlet, a series of folded pages held together by staples or adhesive. The folded pages are referred to as *wraps*; hence a 32-page comic would be comprised of eight wraps and a cover. (FFB 2005 #7370). The physical structure of a comic book is generally described using terms similar to those used for other books and magazines – spine, inside front/back cover, upper/lower staple, first page, centrefold, etc. Largely self-explanatory terms such as *talent info* (details about artists and writers, usually appearing on the first page), *narrative box*, *word balloon*, *thought balloon*, and *margin* may also be used to describe various areas of a page. *Indicia* is used to refer to an area listing general information about the comic book, such as publisher, title and issue number. (Overstreet and Blumberg 2002: 129).

## MATERIALS – PAPER, INK AND STAPLES

Like any other art form, some producers of comic books are more concerned with issues of longevity than others. Early comic books were printed using the same processes used for newspapers and illustrated journals – relief halftone, gravure and “four-colour” offset lithography – and using the same poor quality paper. Even when comic books became collectible, the general mechanism of production remained the same. Large comic book companies such as DC and Marvel still use cheap papers, even though they are fully aware of the collectible nature of their work – so much so that often a comic book title will be published with more than one cover available, to encourage collectors to buy multiple copies of the same title.

However, as Dowd writes, “cheap is a relative term”; large runs on high-speed offset presses are generally beyond the means of the independent comic book publisher. Xerography and the mimeograph were the printing methods of choice for many independent artists during the 1970s and 1980s. Mimeograph machines were still being manufactured as late as 1986; photocopiers are still a popular choice for producers of limited edition comics, “mini-comics” or zines. More recently, computer programs like Adobe Illustrator, Adobe Photoshop and Quark Xpress have been used to design and

draw comic books, which may then have been printed by any one of a number of available printing methods, including electrostatic or laser printing, inkjet printing or offset techniques (Dowd 2004: 21–24; Dowd and Reinert 2004). Some artists even use traditional letterpress, intaglio, screenprint or planographic printing methods to produce their works, with hand-coloured or collage additions.

The focus on cheapness is changing, however, with modern comic book artists often more concerned with achieving a particular appearance. For example, during SLV's "Zap! Pow! Blog!" online event, comic book artist Mandy Ord (author and illustrator of *Nosebleed*) wrote that her main criteria when choosing a printing method was the quality of black achieved – "To spend weeks/months on a project/ and to have the art reproduced 'grey' is/ heartbreaking". Ord works closely with her printer to find methods to produce a suitable depth of black. For *Nosebleed*, Ord also experimented with a high-gloss paper: "...the black almost seems to sit on top of the white, like...ink from a woodblock print." Self-publishing certainly allows artists to experiment with different printing processes, making the process of choosing inks, scanning resolution and printing methods part of the artistic process. (Ord 13/1/2007: 5:07pm; Ian T 13/1/2007: 5:30pm).

The primary focus of comic book artists is rarely the longevity of the materials they have chosen: "...personally I never reproduce my work on mass/ with the notion that they will disintegrate OR last a thousand years... I have no idea if the ink on the paper of my comics/ will disintegrate or/ smudge after a long period... I think self publishers/ may not think about the archival nature/ of their art when the work/ is often received on such a small scale." (Ord 13/1/2007: 5:54pm). Some artists have gone online ("webcomics"), partly to eliminate printing costs and some with the idea that digital formats will outlive paper copies (Cooper and Murphy 14/1/2007). Others (e.g. Bentley 13/1/2007) hope that their work will end up in public collections, to be preserved for posterity.

## DAMAGE AND DETERIORATION

The condition of SLV collection items varied considerably. The oldest item in the exhibition was a broadsheet page from the "Sunbeams" section of the *Sunday Sun* newspaper, dating from 1926 and featuring Ginger Meggs. Other items featured included *The Fatty Finn Book No. 2* (1930), *Captain Atom No. 8* (1948), *Flynn of the FBI No. 12* (1952), *Yarmak Jungle King No. 24* (1957) and *The Shadow No. 120* (1961). The most recent comics in the exhibition included Mandy Ord's *Nosebleed*, Christopher Burns' *Eldritch Kid No. 2* and Ryan Wilton's *Azerath No. 1* (all 2005).

The newer material was in pristine or near pristine condition, with still-white paper and unmarked and undamaged pages. Occasionally, glossy surfaces (especially blacks) had been marked by fingerprints.

These items required no treatment before exhibition. Older items, however, were more problematic. Papers had become yellow and brittle, and edge tears and small losses were common. The spine of the comic book had generally experienced the most damage, such as splits along the spine fold, tears and losses around staples, and creasing and/or loss of the printed surface, which is often quite thin and fragile and thus easily damaged. In addition, staples were often rusted, broken, missing or misaligned, making it difficult to open the comic fully without risking the integrity of internal pages. "Spine roll" was very common, where the spine edge of the comic book had curled upwards or become skewed. Staining and foxing were also common, particularly on the inside of covers, where transference from the more acidic "text" pages and ink had caused yellow stains and curiously bright yellow foxing. It was felt that many of these older collection items required treatment in order to stabilise them for exhibition and future use as a reference collection.

This type of damage should be expected for comic books of this age. According to a major US reference, the *Overstreet Comic Book Grading Guide*, finding comics published before 1970 in "mint" condition (i.e. no damage apart from small printing and binding defects) is extremely rare (Overstreet and Blumberg 2002: 138). Australian experts concur, stating that it is difficult to classify any Australian comics as mint due to poor paper quality (Morrison 1997: 4–5).

## TREATMENT OF COMIC BOOKS – THE INDUSTRY

Before embarking on a treatment program for comics from the SLV collection, research was carried out to determine what conventions should be observed. Opinions were sought from curators, collectors and US comic book specialists Susan Cicconi, of the Restoration Lab, and Tracey Heft, of Eclipse Paper. Opinions posted on various online discussion groups were also reviewed.

Surprisingly, "restoration" of comic books appears to be viewed with great deal of suspicion amongst collectors. As a result, "restored" comic books are worth significantly less than items in mint condition, possibly even less than those in a poorer but unrestored condition. The purple label indicating that a comic has been restored, assigned by the Certified Guaranty Company (CGC), a company that assigns "grades" to comics based on their condition, is even called the "Purple Label of Death" (PLOD) by collectors. The CGC has dedicated "Restoration Detection Experts" who check comics for signs of restoration before passing them on to their grading experts (Overstreet and Blumberg 2002: 122).

"Restoration" (the term "conservation" is rarely used) was not always viewed with such suspicion. In the eighties, when the commercial value of comic books began to increase dramatically, many restorers made money by taking copies in poor condition and making them

appear new, often drastically increasing their sale price. While some collectors were happy to purchase repaired copies, figuring that their purchases would now last longer than they would have otherwise, it would appear that often restoration work was poorly done and/or not fully disclosed to the buyer (Overstreet and Blumberg 2002: 91). Sometimes comics were sold at very high prices as items in "mint" or pristine condition, more recently via eBay, using scanned images that had been manipulated and falsified "feedback" ratings (Krause Publications 2004), when in fact they had undergone extensive repairs that may have included replacement and inpainting of large sections or substituting damaged pages with others from copies of the same comic. These buyers found that the actual value of the comics they had purchased was much less than what they had paid, and understandably some resentment developed.

Inconsistent use of terms such as preservation, restoration and reconstruction to describe different types of treatment has confused buyers, especially as it would appear that treatments other than those termed "restoration" are not required to be listed on sale documentation. Given the financial difference it can make, there is an increasing emphasis on "disclosure" of any treatment carried out before a sale is made. Indeed, the Overstreet Guide states that "without honest and full disclosure of restoration on a given book, and without a greater understanding of the many methods involved in preserving and/or restoring comics, restoration is likely to continue to suffer a negative reputation." (Overstreet and Blumberg 2002: 91).

## ASSESSING CONDITION – THE INDUSTRY

Equally intriguing is that a whole industry devoted to condition reporting and assessment has evolved around the collecting of comic books, partly informed by conservation practices but entirely separate to our profession. The comics community has its own nomenclature for various types of damage – for example, *bug chew*, abbreviated to BC or BUG; tears and splits are *sealed*; items are *pressed* rather than flattened; *browning* is used to indicate paper discolouration. Other terms include *dust shadow* to indicate where part of a comic has been exposed to dust particles over time, resulting in a darkened area; *graft*, to indicate a large fill; *Marvel chipping*, a term used to describe a trimming defect that occurred primarily in 1960s Marvel comics which produced a ragged edge around the cover; and *sun shadow*, similar to "dust shadow", except caused by light exposure.

*The Overstreet Comic Book Grading Guide* is one of the most influential forces in the "grading" of comics. First published in 1992, the current Guide uses a "10 Point Grading Scale" to define the condition of a comic, though in fact it has 25 distinct categories (Overstreet & Blumberg, 2002, 83). The Grading Scale ranges from a score of 10.0 (*Gem Mint*) to 0.5 (*Poor*). The scale has a very

positive slant to it, with only the last three grades (*Fair/Good*, *Fair* and *Poor*) having any kind of negative connotation. The grading scale would appear a little top-heavy, with very minor delineations defining the top categories (e.g. *Near Mint/Mint*, *Mint* and *Gem Mint*), and only a few categories to describe the general mass of used comics. As an example, the average used comic book generally warrants a grade of 4.0, or *Very Good*, indicating a book in reasonable physical condition, with some tears, creases, losses or abrasions and perhaps some stamps and initials applied. The colours may be faded, and the paper discoloured but not brittle. The spine may be distorted, the staples may have rusted and the centrefold may be loose or partially detached. Compared to a conservator's likely assessment, "very good" might seem an overly generous description.

Assessing and describing the condition of any item is always a subjective affair. The Overstreet Guide is ready to admit that grading is "more of an art form" and that "grading is an inherently subjective enterprise" (Overstreet and Blumberg 2002: 89). *The Overstreet Comic Book Grading Guide* still attempts to remove as many possible sources of conjecture as possible; the 2002 edition contains tables suggesting the number of allowable defects for each grade, as well as very precise definitions for what would constitute "minor", "moderate" or "extreme" damage. The original 1992 Overstreet Guide also introduced the Overstreet Whiteness Level (OWL) for grading the colour of comic-book paper, although use of this card appears to have fallen out of favour.

The CGC employs a "blind" grading system, where three separate graders assess the same comic, without knowing the others' scores, in an effort to reduce subjectivity (Overstreet and Blumberg 2002: 122-123). The use of such a detailed grading scale as the Overstreet Guide must reduce differences between assessments; however, there are other factors that affect a comic's grade, such as rarity, "eye appeal" (how pleasing the book is to look at, overall) and whether or not is part of a "pedigree" collection. (Pedigree collections are those that belonged to personages of note; for this reason, it may not be appropriate to remove inscriptions and initials from comic books).

Though the US industry undoubtedly has an influence on the Australian industry, Australian dealers have often used condition descriptors from the less complicated UK system – as Australia has little speculator interest and thus less valuable comics, there is often no need to make sharp price distinctions between copies in "fine" or "mint" condition. The UK system contains only two categories, "A" and "B". "A" comics are "nice" copies with limited defects; "B" copies have more serious condition problems (Morrison 1997: 4-5).

## WHAT IS “RESTORATION”?

The Certified Guaranty Company (CGC) and the *Overstreet Comic Book Grading Guide* are two very large and influential sources of treatment-related information within the comic-book collecting community. Despite some calls to adopt the definitions put forward by organisations such as the American Institute for Conservation (Bonagofsky 30/6/2006) and the International Institute for Conservation (Heft 12/5/2006), both companies have developed independent definitions of what constitutes “preservation” and what is “restoration”; these definitions have changed frequently over the years. In recent years there have also been attempts to introduce the term “conservation” into the industry.

To conservators, this seems like reinventing the wheel. As conservator Tracey Heft writes: “[There are] definition[s] adopted and used by museums and museum professionals all over the world... it continues to amaze me that people are still trying to “alter” the definition to fit their situation.” (Heft 12/5/2006). Other collectors are also considering this issue: “The question that should be asked is whether the comic book community desires to create a different understanding for the term restoration, particularly setting itself apart from other paper industries, in order to accommodate a group of people...for whatever personal reasons.” (Zaid 2006).

CGC currently defines restoration as “treatment that returns the comic book to a known or assumed state through the addition of non-original material for aesthetic enhancement.” (CGC Glossary: 2007). Tape removal, dry cleaning, replacing loose pieces, disassembly and reassembly of a comic, some staple replacements and “pressing” are apparently not considered restoration treatments by CGC (it is not clear if these are considered “conservation”) and therefore are not required to be disclosed to buyers.

The 2002 edition of the *Overstreet Comic Book Grading Guide* defines preservation as “...a decision to leave the book in its current state while preventing further decay” but states that this might include actions such as securing a loose staple or repairing a small tear or hole. Conservation appears to be equated with preservation, described as “attempts to preserve a comic...without actually ‘restoring’ it to any degree.” Restoration is termed “the middle ground” and can include the repair of minor tears and holes, “colour touch”, surface cleaning and staple replacement. *Reconstruction* is defined as where significant amounts of new material have been added – for example, a large portion of the cover or an interior page may have been reconstructed, recoloured or assembled from pieces of other lower-grade examples. “Extensive repair work that significantly transformed the condition” of an original comic is also called reconstruction (Overstreet and Blumberg 2002: 91-92).

The 2006 edition of the *Overstreet Comic Book Price Guide* contained a new definition of restoration: “Treatments intended to

return the comic book to a known or assumed state through the addition of non-original material. Examples of restoration include color touch, piece replacement, cleaning, reglossing.” Previously defined as treatments undertaken to “enhance” the appearance of the comic, the term restoration now refers only to treatments that add non-original material. The 2006 edition also includes a new term in the glossary: conservation. This was defined as “archival reinforcement, tear and spine split seals, piece reattachment and deacidification.” These new definitions caused great consternation in the industry and were seen by some as purposefully excluding treatments such as “pressing” from the definition of restoration so that unscrupulous dealers would not be required to report this treatment on sale documentation. (Zaid 2006). The furore over the new definitions caused a retraction from the publishers: “The entry regarding the definition of restoration was in error and is an unedited draft version.” (Anon 21/4/2006a). On the same day, the publishers solicited opinions from collectors and dealers, via their online newsletter, *Scoop*:

*How would you define “Restoration” in comics? What would you include and not include? ...What, if any, forms of restoration are acceptable to you? And why? And under what circumstances? We’re eager for as many opinions as possible! Let us know what you think!* (Anon 21/4/2006b)

Not surprisingly, *Scoop* received as many definitions as answers. Some of these were closer to the AICCM’s definition than others; most respondents had very specific ideas about what treatments should be considered acceptable “restoration” and what should not, resulting in a confusing array of very specific definitions. More generalised statements ranged from “...any deliberate attempt to alter the condition of a comic” (McDevitt 5/5/2006), to “adding ink, glue or paper that was not already part of the book...” (O’Neill 5/5/2006) to “...altering the book specifically to enhance its monetary value” (Gentner 5/5/2006), and “...the line between what is considered restoration and what is not is simply what can be detected.” (Nelson 5/5/2006).

It would appear that the comic book industry needs to adopt definitions that are removed from specific types of treatment and from any judgements regarding monetary value. As many contributors to the debate have noted, it is impossible to determine precisely *why* a person may have decided to restore or conserve a comic after the fact, so to make statements about hypothetical motivations is a moot point. The relationship between conservation work and commercial value obviously changes with time and personal viewpoints, so issues of value should also be kept separate from the definition. Currently, the industry appears to update its definitions in order to conform to prevailing and ever-changing trends and opinions. Requiring one term to combine all of these separate factors creates confusion, as Tracey Heft commented during an online discussion about adhesives and retouching:

*If by saying "a very minor amount of glue and/or a very minor amount of color touch is acceptable as "unrestored" you actually mean to say that "small amounts of restoration should not affect the value or collectibility of an item as much as larger or more intrusive forms of restoration" then that should be the message being put forward...by labeling restoration as conservation and vice/versa it only continues to blur the lines between conservation and restoration, clouding the issues and confusing everyone. (Heft 28/7/2006)*

## PRESSING

Pressing appears to be one of the most controversial treatments applied to comic books. The term generally appears to indicate flattening carried out using a dry mounting press, rather than a humidification treatment, and is often carried out to remove small dents, creases or other imperfections in the comic book. Often, the book is pressed while still bound. While this treatment can be performed safely and successfully, some restorers will use too much heat or too much pressure, effectively "pancaking" the book. However, conservators such as Heft and Cicconi also use the term to describe more traditional humidification and flattening treatments (Heft 2006: *Pressing*; Cicconi 09/08/2006).

Many collectors feel that pressing is a restoration treatment and should be disclosed to future buyers, especially as removing slight defects can greatly increase its value; some are concerned that pressing damages the comic in some way. Others feel that, as the treatment does not add any new material to the book and in any case is often very difficult to detect, disclosure should not be necessary. (Cicconi 2006: pers. comm.; Zaid 2006; Scipior 2005: *Pressing*). Opinions on whether pressing is an *appropriate* treatment, restoration or not, seem to be wrapped up in questions of value and motivation. Pressing is appropriate if it increases a collector's personal enjoyment of their collection; it is controversial if it is performed with the primary purpose of increasing its resale value – e.g. "I think restoring a book just to try to get extra money for it is a bad practice and should be discouraged." (O'Neill 5/5/2006). CGC itself does not indicate when pressing has occurred, as they feel it is impossible to tell whether a comic has been "professionally pressed" as opposed to "say, stored under a stack of encyclopedias" (Dougherty 2005). Indeed, assuming the treatment is performed in a sympathetic manner, flattening is such a routine treatment that such concern over its "status" as a treatment seems absurd. Disclosure of such treatment is also a non-issue for conservators. Few would have a problem with the "disclosure" of a flattening treatment; indeed, this is standard practice as outlined in the AICCM *Code of Ethics*.

## ORIGINAL STAPLES

Original staples are also valued by collectors – new staples could indicate, after all, that the comic has been disbound and possibly reconfigured, replacing damaged pages for those from other copies. (Also called *marrying* – see FFB 2005 #7370). Paper conservators are generally quite comfortable discarding original fasteners, particularly those from the twentieth century, such as metal paperclips, staples and pins, and particularly if they are causing rust stains. Often alternate fastening solutions are imposed, such as stitching a pamphlet together using the original staples holes. However, replacing the staples with stitching would be unacceptable to most collectors, as it changes the original format and appearance of the book, and the commercial value of the comic would be reduced accordingly.

There are, of course, divergent opinions on this matter within the industry. Under the heading of "Not so bad restorations" in another issue of *Scoop*, one correspondent writes "replacing staples, I mean, why worry? It's not the comic, the staple may be rusting hurting the cover?" (Farrell 5/5/2006). Others see staples as an undeniably original piece of the comic – as Susan Cicconi states "...once you remove staples from a comic book, you are altering the book".

Conservators Cicconi and Heft will remove staples if they are too corroded, tending to replace them with staples of a similar vintage when work is performed for collectors. Heft does feel that stitching is a viable option, however: "...the problem is that the demands of the public are very different from the requirements in a museum context. My clients insist on staples of similar vintage, so I have a large collection of vintage staples that I have culled from damaged books over the years. In your [SLV's] case, stitching would preserve the overall integrity of the book and eliminate the problems associated with amalgamations of paper and metal. However, I would retain the original staples in a Mylar sleeve so that the inherent information they possess is not lost." (Heft 12/08/2006). Replacing original staples with new, stainless-steel staples is another option, one more justifiable to a conservator but unlikely to be as popular with a collector.

## OTHER TREATMENTS

Many comic book restorers have websites that illustrate "before and after" examples of their work, with a list of what treatment was performed. A typical comic book treatment performed by a professional conservator can be exemplified by Tracey Heft's treatment of a copy of *Action Comics #6*: *Staples removed, front cover and interiors separated, cover dry-cleaned, cover and interiors humidified; torn areas repaired and/or reinforced, missing areas infilled; missing and/or damaged areas inpainted; inpainted areas recoated and pressed; recreation of fine details; cover and interiors refolded; cover and interiors reassembled; cover*

*reattached; delaminated areas repaired.* (Heft 2006). For Cicconi, a typical treatment may consist of dry, solvent and aqueous cleaning, tape removal, tear repairs, replacement of losses, inpainting, deacidification, staple cleaning, staple replacement and sizing of covers. (Cicconi 2006).

Cicconi and Heft both use traditional materials for repairs (e.g. Japanese repair papers and wheat starch paste); Cicconi often uses up to three layers of various repair papers to achieve the right look. (Zurzola and Cicconi 2004). Both are happy to consider heat-set tissue as a repair material, although they don't always find it a better solution. Heft has found that heat-set (E.g. Crompton) does not necessarily make a more invisible repair than traditional repair papers, but that the sheen can be reduced somewhat by swabbing with methanol. Heft usually tints his repairs with acrylics, after they have been applied, and regardless of whether they are paper or heat-set tissue. Many repairs are undertaken on damaged spine areas, or to reinforce creased and weakened areas.

Solvents may be used to remove tape and tape stains, or to wash out discolouration caused by ink transfer, the latter reportedly occurring predominantly on the interior of the front and back cover. (Cicconi-Killiany 2002: 98). Both Heft and Cicconi advise caution when using solvents, as comic-book inks (especially those on the cover) vary considerably in solubility. Most wet treatments will require the comic to be disbound. Susan Cicconi notes that "it is almost impossible to replace original staples in the precise location" and that some clients don't want the book taken apart under any circumstances (Cicconi 2002: 93; Zurzola and Cicconi 2004).

## "AMATEUR" CONSERVATION

There is a large amount of "amateur" conservation and restoration work occurring amongst collectors and dealers; comic book chat groups frequently contain question-and-answer threads about various treatment options. Some of these are hair-raising, but it is likely that there are many reasonably skilled "home restorers" out there. Often the treatments they perform are similar in nature to those performed by professional conservators, but the choice of materials is inferior and the understanding behind the "cause and effect" of both deterioration and treatment solution is lacking.

The proliferation of "amateur" work is certainly an issue contributing to the distrust of the profession as a whole. Some restoration rating systems attempt to distinguish between "amateur" and "professional" work (e.g. see Overstreet & Blumberg 2002: 92 & 101-109), although others argue that this division is irrelevant and that the quality of work is not necessarily dictated by a person's professional status – the words might be more meaningfully replaced by "bad" and "good" (Heft 30/6/2006).

So what kinds of treatments are performed by collectors and dealers? Surface or "dry" cleaning is a common treatment performed by the home restorer (povertyrow 2002 #7280), as are various types of repair, or "tear seals". Collectors and dealers performing their own repairs appear to rely on commercially available adhesives and repair papers, such as "transparent tear repair tapes" available from art supply stores. There is some awareness that materials should have a neutral pH (povertyrow 2002 #7270). Sometimes comics are trimmed to remove damaged edges; this treatment is generally frowned upon (Cicconi 2002: 93).

Many restoration websites and online discussion threads report the regular use of "VM&P Naphtha" to wash comic books (e.g. Scipior 2005: *Water Cleaning*); in one particular hair-raising online discussion an amateur restorer reports "...an incident where I submersed an entire low grade book in...Naphtha-based cleaner [general purpose cleaner #08984 from manufacturer 3M], but I think I left it in too long...because much of the ink from the cover literally dripped right off...I suspect the products I used that contained these chemicals were not pure enough." The same contributor has used toluene (from an aerosol carburettor cleaner) on a tape stain in the past and was seeking a better source of this chemical (jimm94 2004 #7335).

There is a great deal of discussion about "pressing", of course; one posting suggests placing just-washed pages between sheets of acid-free blotting paper to remove excess water, and then placing the page in a dry mount press for 15-30 seconds on about 200oF. The result is a cover "...pressed flat...dry with no dimensional changes, and ready to re-assemble." This appears to be done after both water and solvent washes, but is also performed on dry pages in order to correct "spine roll" and other distortions (povertyrow 2002 #7270).

Deacidification is another common treatment, using a (presumably non-aqueous) spray or a calcium carbonate wash bath (Scipior 2005: *Water Cleaning*), although not everyone is convinced of its efficacy (Wilson 1992: 31). Cicconi reports that she does not bleach comic books, as it is too risky for low-grade paper (Cicconi and Sarill 1989), but bleaching would appear to be reasonably common on the whole. Some current websites report the use of Chloramine T to bleach comic books (e.g. Scipior 2005: *Water Cleaning*); posts from discussion lists mention other potentially damaging methods, such as the use of calcium hypochlorite, potassium permanganate, exposing damp pages to natural or artificial UV light and rubbing white bread over the surface of the paper. (Apparently the flour contains bleach which can lighten staining – this remedy appears to be called the "Wonderbread" method). Spraying a dilute mist of Clorox (chlorine) over a foxed book appears to have been quite common amongst booksellers (Arty 2003 #220718). Not all post-writers are in favour of bleaching, however: "To the best of my knowledge the only way of removing some foxing is bleaching, which I feel is a case of the

cure being worse than the disease! And PLEASE – you restoration experimenters – please don't go out and buy a bottle of Clorox Bleach!!!" (povertyrow 2003 #220712).

Retouching is often performed on damaged comic books; while conservators like Heft and Cicconi inpaint fills and repairs, others will "overpaint" existing artwork to blend in repairs (Scipior 2005: *Color Touch*). The Overstreet Guide mentions that felt-tip markers and inks, including printing inks, might have been used to "colour touch" damaged areas (Overstreet 2002: *Glossary*; Wilson 1992: 29). Others have attempted to remove unsightly touch-ups by scraping away the offending colour (Zurzola and Cicconi 2004).

Resizing or "reglossing" is another popular treatment, either over repairs or as an overall treatment of the cover. Methyl cellulose and gelatin are common choices for professional conservators, although "povertyrow" (2003 #7310) reports that "[methyl cellulose] really doesn't recreate that gloss we are used to in the 50's and later books". It would appear that some restorers apply synthetic varnishes by mixing the material with solvents like Naphtha, which then evaporates to leave a glossy surface.

Few of these types of treatments appeared to have been carried out on SLV collection items; felt-tip pen and ballpoint had been used on some occasions to disguise damaged areas and sticky tape had been applied to some books, but on the whole the comics appeared to be largely untouched. This lack of intervention may be due to the much lower values of Australian titles.

## APPROACHES TO TREATMENT – SLV COLLECTION

Following this research, the author discussed possible treatment approaches with the SLV Rare Books Librarian. Maintaining the perceived commercial value of the collection was considered to be important, but equally so was the need for collection items to withstand the various pressures of exhibition and use as a research collection. The treatment ultimately performed on the collection was not particularly controversial from a paper conservator's perspective, but may raise the ire of a collector in some cases. A fairly minimalist treatment approach was adopted, only carrying out treatments where the comic book was at risk of further damage if it was not stabilised.

Surface cleaning was carried out using Mars Staedtler white vinyl erasers and vulcanised rubber cleaning sponges; aluminium template "masks" were sometimes used to protect inked areas during cleaning. Small wedges of eraser, with a pointed end, were often used to clean around lettering and other fine details.

Where possible, tears were repaired by adhering overlapping areas. Otherwise, tinted Japanese tissue papers were used, adhered with wheat starch paste. Layers of Japanese paper were applied

to fill missing corners or pieces of covers. Generally, fills were not applied to "text" pages, unless structurally necessary. Repair and fill papers were tinted with Liquitex acrylic colours and an airbrush. Tidemarks proved to be a problem when repairing some of the old, very discoloured comic books – experiments were carried out using heat-dried methyl cellulose instead of wheat starch paste as the repair adhesive, but generally starch paste gave the best results. Fills and repairs were inpainted if they appeared on a cover or a page that was to be displayed. Colour pencils usually provided a better surface finish and more control than water colours; however, the surface reflection of the inpainted fills was usually reasonably different to that of the original printed ink.

Original staples were retained wherever possible. Rust was sometimes removed using a scalpel, with ethanol applied afterwards to degrease. This treatment does not prevent any future corrosion of the staple, however, and is physically damaging – the surface of the staples will have been scratched by the scalpel. Staples that were too corroded or broken were replaced with new stainless steel staples; original staples were kept with the treatment report. In some cases staples were removed for display, so that the book could open properly, and were replaced after the exhibition had finished. (Replacing the staples and aligning pages correctly is indeed difficult, as Cicconi and other have noted). The most invasive treatment that was performed was the odd instance of creating new holes for staples, where the original staple had been misaligned on binding so that pages could not be opened without risking the formation of tears in the page.

Items that were badly creased or skewed were disbound, humidified using Gore-tex and flattened between felts. Usually, the pages were humidified and pressed folded. Despite the usually poor-quality paper being treated, no problems arose during humidification. No clay-coated or glossy papers were humidified – a few glossy comic books that were to be displayed flat (to show a wrap-around cover design) were pressed open using weight only for a couple of weeks, as it was anticipated that they would not respond well to moisture. This "weight-only" method worked well enough in this instance, as the comic books were not very thick.

Adhesive labels and pressure sensitive tape was removed, using a heated micro-spatula or acetone vapour to lift the carrier and white vinyl erasers and "crepe" erasers to remove residues. This was not always an easy process; the coloured inks and the discolouration present in the paper were sensitive to acetone (one of the more effective solvents for the adhesive tape) and the printed surface was extremely susceptible to damage by the physical "rubbing" of an eraser. Often adhesive residue was "rubbed" with a soft vinyl eraser in order to give the residue some body; this could then be balled up and removed with tweezers with less risk of damage. Sometimes damaged areas were repaired prior to removing tape, if the alignment

was good, to strengthen the area before the physical application of an eraser. It was noted that often some colour had migrated into the adhesive layer, making some colour difference visible on removal.

## DISPLAY METHODS

The budget for the *Heroes & Villains* exhibition was limited, which necessitated close consultation with the SLV Exhibitions team in order to satisfy security and design requirements. At first the use of rare earth (neodymium) magnets was considered. Neodymium magnets are very strong and available in very small sizes. In order to hold the comic books onto the wall, however, two magnetic “strips” of some kind would have had to be attached or sunk into the display walls (one at the top and bottom of the comic). This would have been difficult to achieve in a cost-effective and visually pleasing manner, especially as the size of the comic books varied. There were also concerns that direct contact with the magnets could cause damage to the comic book paper or vice versa; although there are no reports of adverse reactions between neodymium magnets and paper within the conservation literature, the product specification lists rare earth magnets as the type least resistant to corrosion. Possible slippage was another issue – after some experimentation with the different sizes available, it was discovered that not all sizes were capable of supporting the weight of a comic book, the thickness of the comic being one of the critical factors. A “test” comic was attached to a wall in the lab for a week, with markers to locate the original position of the comic book on the wall; no slippage was apparent after a week but this test period was well short of the five-month exhibition planned so these results remain inconclusive.

This led to experiments with strapping the comic books to supports made of four-ply mount board, using pre-cut polyethylene strapping tape (“Polystrap”). Comic books were attached to a support, cut to the same size as the comic, using strips of Polystrap and double-sided tape. The width of the Polystrap tape used varied from comic to comic; usually two thicker straps were placed underneath the page to be displayed, to hold the bulk of the book secure, with thinner strips or corner pieces placed over the display opening. Polystrap had the advantages of being relatively cheap, pre-cut in different widths, and less glossy and softer than Mylar.

At first magnets were still considered as a fastening option, with the idea of glueing the magnets to the reverse of the mount board support so that the comic could be attached to a metal surface as before. Another variation was to punch metal “posts” through the corners of the support and at the centre of the top and bottom edge, so that the magnets could simply hold the two metal surfaces together, without any need for adhesive. However, these methods had the same disadvantages as before – namely, that the mismatched sizes of the comic books to be displayed would make it difficult to create a clean appearance to the exhibition and a straightforward installation process.



Fig 1. Installation of comic books for *Heroes & Villains*, showing template used for placement of Velcro strips

Finally Velcro was chosen as the fastening material. Using mount board and Polystrap as before, a strip of the “loop” Velcro (the softer surface) was attached to the top and bottom of the reverse of the support. A template was used to ensure consistency in the distance of the Velcro strips from the top edge of each comic, so that during installation all measurements could be made using the top of each comic book as a guide. (Velcro strips were placed two centimetres from the top edge and then either five, ten, fifteen or twenty centimetres from the top edge, depending on the size of the comic in question). The Velcro was an adhesive-backed type, which the Exhibitions team had previously used to hang large, heavy panels and signs, without any noticeable slippage or failure. To circumvent any adhesive failure, the corresponding “hook” Velcro was attached to the wall with staples (using a staple gun), as well as the existing adhesive. Items that were not suitable for vertical display were placed in cases, either on simple supports made of mount board, or on low book cradles constructed from Coreflute and grey card. Polystrap was used to hold items to their support, where necessary.

The display method was not as straightforward as had been hoped, considering the large number of comics that required mounting. Making individual supports for each comic and then measuring the position of each comic on the wall proved to be quite labour intensive, requiring teams of two for installation. The comics were attached over vinyl wall panels that included additional images, text and item labels. These vinyl panels were very thin and attached to the wall via surface tension – no adhesives were involved. Shallow acrylic “boxes” were then attached to the wall, covering the displayed comics but not the whole panel.

No slippage of vertical mounts was noticed during the period of the exhibition (about five months), although a few problems did arise. The top page came loose on some comics, pulling out of the Polystrap corner restraints and moving towards the acrylic, due to static electricity. In some cases applying an antistatic cleaner to the acrylic box was enough to release the page, but usually the box had to be removed and the comics restrapped. This problem occurred on comics where the front page was being held in place by “corner” strips only; these were replaced with a strip of Polystrap that ran the full length of the comic and the problem did not reoccur.

The acrylic boxes also allowed a small gap between the wall and the box, very small but wide enough for one exhibition-goer to insert a few advertising pamphlets into the display. Fortunately there was no damage done, but this did demonstrate some security drawbacks. The books would also have been susceptible to damage in the event of a water leak or extreme fluctuations in environmental conditions. Nevertheless, the appearance of the exhibition was very satisfactory, with viewers reporting that they appreciated being able to get so “close” to the comics.



**Fig 2.** Installation of comic books for *Heroes & Villains*, showing finished panel with comics covered by acrylic display box

## CONCLUSIONS

The treatments carried out for *Heroes & Villains* exhibition successfully stabilised the comic books for display and future use. However, while the Australian market is nowhere near the size or intensity of that in the US, it is probable that some collectors would prefer that no treatment whatsoever had been performed, in order to retain the market value of individual books.

So, what does the future hold for the relationship between conservators and comic book collectors? In the words of Susan Cicconi, it would appear that “...competent, skilled and professional conservation is desperately needed to convince people that it is justifiable, desirable and necessary for preservation” and that “...the very core of this debate is really the issue of disclosure.” (Cicconi-Killiany 2002). Conservators should continue to uphold their professional ethics in dealing with comic book collectors and dealers, by providing documentation of treatment performed and refusing jobs that make them uncomfortable – or trying to persuade clients of the merits of alternative treatments.

Professional ethics alone will not solve the problem, however: “The pro restorers provide a detailed checklist of what has been done. Unfortunately, that checklist doesn’t always stay with the book, if you get my meaning” (povertyrow 2002 #7267). Cicconi also advocates awareness-raising activities within the community, such as distributing brochures about conservation ethics to comic stores and conventions, and by publishing articles in trade literature. As it would seem that a large percentage of comic book collectors and dealers embrace the internet as a medium for communication, it is likely conservators could have an impact by becoming more involved in relevant online discussion groups. From the perspective of the conservation profession, it would be preferable if the comic book industry embraced existing terminology and approaches as outlined by organisations such as the AIC and the AICCM. However, given the size and speed at which the comic book industry operates, it may be impossible to instigate the shift in perception that would be necessary for this to occur.

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## Suppliers

Acrylic display boxes and wall screw fixings	Acrylic Display Industries 21 Kevin Avenue Ferntree Gully, VIC 3156 Tel: (03) 9758 2749
Magnets	AMF Magnetics Unit 6, 54 Chegwyn Street. Botany NSW 2019 Tel: (02) 9700 0055 Fax: (02) 9700 0222 sales@amfmagnetics.com.au <a href="http://www.magnet.com.au/">http://www.magnet.com.au/</a>
Polystrap	Benchmark PO Box 214 Rosemont, NJ 08556 USA Tel: 609 397 1131 Fax: 609 397 1159 admin@benchmarkcatalog.com <a href="http://www.benchmarkcatalog.com">www.benchmarkcatalog.com</a>

Velcro  
19mm Velcro Beige  
P.S. 0172 Hook & Loop

Velcro Australia Pty Ltd  
PO Box 2133,  
Fountain Gate, VIC 3805  
5-11 David Lee Road,  
Hallam, VIC 3803  
Tel: (03) 9703 2466  
Fax (03) 9703 2305

Vinyl wall panels

Taylor Made Signs  
43 Wilson Street  
South Yarra, VIC 3141  
Tel: (03) 9827 7335

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