Craft and Industry Report:  
Digital Kanthas: print waste as ornament

Abstract:  
This article reflects on a body of practice-based research that considers the recycling of images found in discarded waste sheets from commercial offset-lithography. Specifically it considers how images derived from Indian print waste might be recycled to create new forms of ornament that reflect upon cross-cultural exchange and globalisation. Initially working with large-format waste sheets derived from billboard advertising in the UK, the author utilised cropping and re-contextualisation to create new works. Working with waste gathered from the floors of a thriving print hub in southern India provided an opportunity to extend this exploration to consider waste sheets as catalysts for new forms of ornament, with the content directly referencing themes of historical and contemporary cultural-exchange and globalisation. Largely facilitated by digital tools and connectivity, a new generation of Indian designers have overseen a significant shift in Indian graphic design over the past twenty years. This has been most evident in the packaging of fireworks and hand rolled cigarettes, where traditional and religious motifs have increasingly been marginalised in favour of the integration of western, secular imagery. Working with waste sheets used in the packaging of Indian fireworks and cigarettes, the author considers the Bengali Kantha – a traditional form of embroidered blanket – as a suitable model with which to explore new forms of ornament, connecting the traditional crafts practices of India with contemporary graphic design, and in turn provide a platform for a body of new works that reflect on perceived narrowing of the gap between graphic and textile design through digital production and print technologies.

Keywords:  
recycling  
waste  
semiotics  
packaging  
textiles  
graphic

1. Introduction  
The primary research question could be framed as ‘how can Indian print waste be utilised to create new forms of ornament that reflect upon cross-cultural exchange and globalisation?’ This question was not apparent at the beginning of the process, which is described below, but emerged only later, after a visit to southern India provided a vital contextual platform to focus exploration of materials gathered.

The initial investigations within this project were prompted by the discovery of discarded waste sheets – commonly known as ‘make ready’s’ – within commercial offset-litho printing. These are usually slightly larger than A1 and A2 sheets, and are routinely used to test ink coverage before a print run. The author built a collection of these whilst working as a graphic designer in the mid 1990’s. Regular visits to print works are a routine part of graphic design practice, mainly to check and approve work whilst on press. The discarded sheets are usually stacked by the side of a press and freely available. The most interesting samples are often found by the single or two colour offset-litho presses, where graduated layers of the process colours of cyan, magenta, yellow and black (CMYK) combine over time through repeated printing to create unplanned, stochastic landscapes of halftones, fragmented typefaces and cropped photography. The source of the original images is largely random and dependent upon the previous print runs on each particular press. And so, for example, a single run (commonly known as a pass) of cyan through the press
for a healthcare guide may be printed over a magenta pass from an annual report, a property brochure or packaging for office stationery. Unsurprisingly these sheets carry little value to the printing company beyond their immediate function and once saturated are deemed to be waste.

The author’s acquisition of a number of make-ready sheets from a UK-based printing company specialising in large format 48-sheet billboard posters presented an opportunity to consider these as possible departure points for creating new work. Initially these took the form of a series of investigations exploiting the disparity of scale. Since these sheets were much larger than usual, measuring 1000mm x 1500mm, they offered the potential for dramatic new compositions, featuring fragments of bold typefaces, portraits and logotypes. The most interesting outcomes came as a result of cropping into these in a process that resembled a crude form of landscape photography through the framing and capture of small compositions of 120x120mm (roughly the size of a CD booklet) as in Figure 1 (left). These dense and claustrophobic images drawn from advertising seemed suggestive of the ‘uncanny’: simultaneously unfamiliar yet also familiar. They also resonating with observations raised in Jean Baudrillard’s essay ‘The Ecstasy of Communication’ (Baudrillard 1992:153), in particular the recognition of the ‘..omnipresent visibility of enterprises, brands, social interlocutors and the social virtues of communication – advertising in it’s new dimension invades everything’. These pieces occasionally made a way into the authors freelance design practice, with the scale and relative ambiguity of the resultant images ideally suited to music packaging.

Figure 1: (left) Steve Rigley (1996). Untitled. © Steve Rigley. 120mm x120mm.
Figure 1a: (right) Beedi packaging featuring a chandelier illustration (artist and date unknown).

2. Sivakasi
An exciting development came with the discovery of a large printing community in the south-Indian town of Sivakasi. This became the focus of an internally funded research visit in 2003 that sought to establish the impact of globalisation and digital technology upon indigenous print and advertising. This informed what was to become the essay Re-tooling the Culture for an Empire of Signs (Rigley 2004). At the time of the visit, this small town of 20,000 inhabitants was home to over 400 printing presses, many secured second-hand from the former soviet-bloc counties. The town provided approximately 60 per cent of Indian offset-litho printing, focussing specifically upon calendars, beedis, safety matches and fireworks for the whole of India (2004: 58).

From a design perspective, the graphics for the beedis and fireworks were particularly intriguing. Beedis are hand-rolled cigarettes sold in small clusters and wrapped in branded paper for sale in street stalls. The packaging relies heavily upon image as opposed to text. This is mainly due to the fact that they are popular with rural workers and are sold across a variety of states where
language and literacy levels may vary considerably. For example Sivakasi is located in the state of Tamil Nadu where literacy rates are above 80%, yet in the neighbouring state of Andhra Pradesh it is only 67%. (National Census 2011) Consequently brands are often known by symbol or the name of the brand proprietor, whose portrait is incorporated into the design. Aspirational symbols or signs of wealth feature regularly in beedi packaging, as shown in Figure 1a (right) where a sample of the paper used to wrap beedis features a crude illustration of a chandelier.

Fireworks are popular throughout India and are used regularly in the many festivals, weddings and celebrations that feature in the Indian calendar. A number of major firework manufacturers are based in Sivakasi with outlet stores offering a wide variety of products. A series of meetings with brand proprietors, printers and designers revealed that the packaging of fireworks had undergone a significant shift between 1995 and 2003, from traditional and religious themes towards western or globalised imagery (Rigley 2004: 64). Whilst pre-1995 packaging was adorned with rich illustrations of peacocks, snakes, or figures from Indian mythology, examples from after 2001 featured blends of western icons and celebrities. Christopher Pinney noted that Indian commercial art once functioned as a political voice (Pinney 2004: 46) yet the packaging of these fireworks has confirmed an increasing preference for western entertainment and media references. This could be attributed to the introduction of MTV and other western imports, including film and fashion, as well as the relative ease of digitally accessing and copying western graphic material. One of the leading manufacturers confirmed that Indian consumers were increasingly drawn to western references preferring London Bridge, Luke Skywalker, even Adolf Hitler to those their parents would have grown up with (Rigley 2004: 64). And so it is clear that, in contrast to those crafts that have remained rooted in traditional practices, commercial art has emerged as a primary indicator of the rapidly changing tastes and habits of a new generation of Indians growing up in a globalised consumer culture.

During the 2001 trip, a series of visits to manufacturers in-house design studios in Sivakasi revealed how these changes had been achieved. Eager to exploit new digital technologies, most manufacturers had replaced highly skilled commercial artists with young, mac-literate graduates from graphic design courses. Working within a design culture that maintains a relaxed attitude towards copyright, these young designers clearly revelled in the opportunity to access a wealth of imagery to feed the cut and paste approach to digital production.

Yet interestingly from a design perspective, the borrowing of western idols and motifs is rarely whole, as the various examples in Figure 2 demonstrate. Although some firework manufacturers have borrowed heavily, often adopting familiar western brand names such as Sony, the process has lead to a number of unique, hybrid combinations. Examples in Figure 2 show how designers from Standard Firework set small terrier dogs against a dynamic Japanese sunburst, and set the name Adolf in a playful script. Designers at Sony Fireworks insert a cartoon starburst into a collage of characters from Star Wars.
Figure 2: Selection of Firework packaging collected by the author from Sivakasi in 2002. (Clockwise from top left) Standard Electric Crackers, 88mm x 102mm. Adolf Hitler, 80mmx 100mm. Emerald, 100mm x 125mm. Detail from Standard Colour Range. Black & White, 65mm x 100mm. Electric Crackers, 140mm x 140mm. (artists and dates unknown).

It could be argued that such unlikely combinations merely confirm what has been termed as India’s ‘gift for cultural synthesis’ (Naipaul 1977: 125). However they also reflect an increasing and conscious use of ‘mixture’ within Indian advertising. Tej Bhatia (Bhatia 2000:169) has noted that advertisers concerned by the limitations of globalisation began to address the binary division of the global and the local by mixing linguistic systems from each. As a consequence, ‘competitive’ or segregated strategies associated with globalisation have gradually been replaced with more ‘co-operative’ and integrated approaches. The resultant forms of ‘glocalisation’ can be witnessed in street advertising, where global brand images are often accompanied by strap-lines delivered in hindi and utilising a local devanagari script. Clearly the unusual semiotic combinations found within the firework packaging of Sivakasi present a similar manifestation of this strategy.
Unsurprisingly the make-ready sheets gathered from the waste bins of Sivakasi differed greatly from the larger format advertising sheets of the UK billboards. Since they were used mainly in the printing of packaging of small items such as matchboxes, they offered greater detail, revealing intricate patterns, decorative corners and frames, and were often peppered with small typographic detailing and portraits of brand proprietors, such as the sample shown in Figure 3. Whilst the sheets used in the printing of beedis were invariably of poor quality with low resolution images, those used in the printing of firework packaging were of a higher print resolution, featured both Indian and western references. The colour palettes of both were vibrant, relying heavily upon solid process colours. Whereas the large format billboard sheets from the UK were characterised by large, dense patterns of halftones, the Sivakasi waste layers were smaller and easier to distinguish, revealing each pass in clearer detail. The capacity to discriminate between individual layers offered a vital opportunity to communicate processes of change, whether it be the passage of time or shifts in values or habits, as one image replaces or ‘overwrites’ another. The layers also resonate with the Indian relationship to the man-made, as described by H Kumar Vyas:

The Indian attitude to history and antiquities is largely shaped by the philosophy that engenders a sense of detachment towards all elements of the man–made environment once they have served the purpose for which they were originally conceived and created. It must take an enormous conviction and a deep rooted sense of ‘passionate dispassion’
(sthitaprajna) to let an object or a built space, created and used with the utmost love and care, to float away in the ‘river of time’ once it has been rendered unusable for any reason whatsoever. (Vyas 2000: 5).

Consequently these sheets presented a fresh opportunity to visually explore the notions of change within the Indian context. As these sheets were scrutinised by the author a new set of possibilities emerged, as the exuberant make-ready’s of Sivakasi carried a structure and complexity that seemed almost ‘baroque’ in comparison, suggestive of ornamental forms. At this point a clear research question emerged, considering whether new, and non-traditional forms of ornament could be derived from these waste sheets, and whether such forms could reflect processes of cultural change, such as those driving the creation of the original packaging.

3. Beauty by mistake

Over the last twenty-five years there has been much speculation and discussion around the forms and values of postmodern aesthetics. Peter Fuller (Fuller 1988: 130) had looked towards fractal geometry whilst Charles Jencks (Jencks 1992: 28-34) acknowledged the ‘fracture’ of forms and the embrace of ‘conflicting semiosis’ as features of postmodern architecture. Such features were clearly evident in the waste sheets, which were full of fractured and dislocated forms, irregular ink coverage, and conflicting forms and typographic messages. But could they be seen to have some form of aesthetic value? Could they even be considered beautiful? Perhaps the most interesting suggestion had already been made by writer Milan Kundera (1984) who suggested that we had finally arrived at the final phase of western beauty: the recognition of the accidental and the unplanned in what he termed ‘beauty by mistake’. Perhaps parallels could be found between the redundant street furniture of Kundera’s New York in ‘The Unbearable Lightness of Being’ (1984: 98), with the accidental collisions of forms within these waste sheets, the broken logotypes and marooned portraits of brand proprietors offering up some form of abandoned beauty: beauty by mistake.

In recent years Kundera’s proposition has been pursued by a generation of artists and designers working with waste material: in product and furniture design Tejo Remy, Droog and Michael Marriot; in graphic design Alex Rich, Daniel Van de Velden and Maureen Mooren; in textile design Toord Boontje and Hella Jonerius and; in fine art Webster and Nobel and Vivan Sundaram. The focus has often tended to be upon the physical attributes of waste material such as in the elegant shadow sculptures built entirely from rubbish by Sue Webster and Tim Noble. Yet the cultural and semantic dimension offered up by print waste seems to present other considerations. Specifically, print waste can be considered to act as both metonym and metaphor for the processes of cultural exchange between India and the west. For example, the term ‘print’ can be used to signify the shift towards a globalised ‘print culture’, whilst at the same time – as discussed earlier – visually represent a passage of time, and the accumulation and synthesis of new ideas and influences.

Considering these random compositions as forms of postmodern ornament suggested that they could be taken into contexts beyond graphic design and into areas associated with craft and decorative arts. If the forms derived from the waste sheets were to address the research question and function as signifiers of cultural exchange between India and the west, the message could be strengthened through careful appropriation, perhaps situated in forms and contexts that signified earlier exchanges. Since textile design and production has previously been a major focus for trade between the India and the UK, choosing to apply such contemporary forms to textiles could connect and compare the current with the historic context.

Choosing to position these forms within digital textiles could also potentially reflect upon changes within the actual production process. Whilst both graphic and textile design have traditionally shared focus upon sign and symbol, recent developments in the field of digital textile printing have brought the design and production methods of both disciplines much closer together,
freeing both from any lingering attachment to the ‘machine aesthetic’ of mechanical production. As the young designers of Sivakasi demonstrate, Adobe Photoshop is the central tool within a design culture that favours online sampling and re-appropriation. It seemed apt therefore, that Photoshop should be used to sample that which has already been sampled, and that digital prints were being made from the wastage of sheets composed of graphic elements created digitally. These possibilities seemed to offer a revision of Lewis Day’s assertion that ‘whether we like it or not, machines will have something to say about the ornaments of the future’ (Balaram 1998: 15).

For a number of years the so-called ‘decriminalisation of ornament’ (Twemlow 2005) has seen a resurgent interest in decorative forms across design disciplines. Designers such as Marion Bantjes and Hideki Inaba have skilfully exploited digital software such as Adobe Illustrator whilst Richard Rhys (Walters 2008) has even created a ‘foundry’ dedicated solely to creating pattern for other designers to buy online. However despite the embracing of ornamental forms, a narrative function can often be missing with little reference to the cultural context in which the work is created. In contrast the waste sheets seemed to be loaded with signs and references to both their source and the commercial context in which they functioned. The visual imagery present within the sheets confirmed an appetite for western motifs, and a capacity to weld these into unique, hybrid compositions: a form of ‘recycling of signs’. Yet could the conceptual process of recycling and re-contextualising waste material find parallels within other, more traditional forms of Indian design?

4. The Kantha
A clear example of recycling in traditional Indian design can be found in the production of the Kantha, which is an indigenous form of embroidered blanket and shawl shown in Figure 4. Kantha production is practiced widely in Bengali villages, and extensively in the Murshidabad District (Senapati 2010: 76). In this process old and worn clothes are unpicked with the cloth separated from the cotton, which is rolled back onto old reels. To create the Kantha, separate layers of the old cloth are cut and stitched together with decorative borders, with the covers featuring a variety of stitched patterns, folk motifs and even western ‘celebrities’ such as Queen Victoria or Lenin (Cooper & Gillow 1996: 95). Kanthas are often given as wedding gifts or to celebrate the birth of a child, and since they are limited by the availability and colour of materials each Kantha is a one-off, allowing the designer an opportunity for self-expression. Such an opportunity is valued to be a means of building and maintaining the community spirit (Senapati 2010: 82).

As an Indian response to the recycling of waste material, the Kantha seemed to present an ideal model to consider how the make-ready’s might be taken from print into textiles. If the waste
sheets were to be scanned into the format of a digital file perhaps it could be ‘unpicked’ in a similar manner to how cotton thread is carefully removed and stored for future use. The most obvious means would be to crop into the sheets in a similar way to the framing of elements from the large format billboard sheets. However, whilst this strategy might reference the digital ‘cut-and-paste’ employed within the Sivakasi firework companies, it would not accurately mirror the Kantha process of careful disassembly.

A more sympathetic method was found when the constituent channels of CMYK were separated in Photoshop. This process is demonstrated in Figure 5 where the four colour image is separated into cyan (Figure 5a) and magenta (Figure 5b) channels. Clearly this could not exactly replicate the process of unpicking coloured stitching since the separated channels cannot be extracted in their original form. However the process of separation did reveal new hybrid compositions that seemed to weld disparate forms into new and unique arrangements. Unlikely combinations emerged, as fractured logotypes and fragments of decorative borders were flattened into the same layer. These arrangements were clearly not planned, but were the product of chance. The fact that these could not be digitally separated into their original CMYK forms seemingly analogous to the fact that histories can only ever be partially recovered. This also seems to reflect the Indian view of history described by Kumar Vyas earlier, where objects are not retained for sentimental reasons, but allowed to ‘float away’ to be dismantled and rebuilt into another form, where itihasa prompts a ‘creative use of past events for the present and future’ and where nothing totally disappears into a black hole’ but rather finds place the continuum of existence (Vyas 2000: 11).

Figure 5: (left) Make-ready sample in full colour subsequently divided into Figure 5a: (middle) the cyan layer and Figure 5b: (right) the magenta layer.
Once detached from their mooring these channels, now in the form of greyscale Photoshop files, were stored within desktop folders for potential future use, rather like the cotton that has been returned to the reel. To test the suitability for printing on digital textiles a small number of these channels were subsequently placed within repeat patterns and printed at a variety of scales in sample swatches. Once issues of scale and resolution were resolved these basic, single layer compositions were applied in a series of colour treatments such as in Figures 6 and 7 which reveal how the formal devices of packaging, particularly the ovals and rectangular forms used to enclose brand titling, re-emerge as forms of fractured ornament.

Figure 6: Steve Rigley (2007). Sivakasi Textile sample. © Steve Rigley. Single channel applied to new colour arrangement 600mm x 556mm.
Further experiments considered how the salvaged channels might be integrated into new compositions as shown in Figures 8. Since each of the salvaged layers contain references to their previous use – product and manufacturers names, instructions for use, brand imagery - the physical act of layering offers the opportunity, as described earlier, to suggest the passage of time and changes in values and habits. Adding an additional layer – as in the repeat pattern of lichen in Figure 8 – creates a dynamic between the man-made and the natural, between traditional and the contemporary. To this dynamic, the textile artifact may lend meaning, acting as sign to connect historic trade relations between India and the UK (textile-based) with more contemporary forms of exchange (print and advertising based).
It seems appropriate that the source of this material is a small town that takes its name from the India deity Shiva, who is traditionally associated with destruction and transformation. Whilst the destructive effects of globalisation upon forms of regional and national identity are evident within contemporary Indian cities (Rigley 2004) perhaps the Kantha offers a traditional model with which to consider new possibilities for transformation and renewal through the recycling of graphic images.

5. The Semionaut
The creative use of ‘past events for the present and future’, which is expressed in traditional kantha production, finds intriguing parallels in areas of contemporary creative practice. In Postproduction, Nicolas Bourriaud considers ‘the eradication of the traditional distinction between production and consumption, creation and copy, readymade and original work’ (Bourriaud 2002b:13) and identifies the DJ and the programmer as key examples of artists who ‘insert their own work into that of others’ (Op Cit). Bourriaud cites the Situationist concept of ‘detournement’ where ‘any element, no matter where they are taken from, can serve in making new combinations’ (2002b: 35). For the DJ this may be in the form of utilising samples and loops, or remixing the work of others, adjusting tempo, levels and introducing new sounds. For the programmer this could be through adapting or utilising open-source code that has been generated by others. Bourriaud argues that the sample ‘no longer represents anything more than a salient point in a shifting cartography. It is caught in a chain, and it’s meaning depends in part on its
Within this creative model, the artists or designer is no longer expected to create from a blank canvas, but to engage with materials already in circulation and already carrying meaning. Within the glossary of *Relational Aesthetics*, Bourriaud describes this new form of artist as a ‘semionaut’, who are less concerned with the tradition beginnings (briefs) or ends (final artefacts) but rather one who invents ‘the trajectories between signs’ (Bourriaud 1998:113).

For graphic designers, who have been described as the rulers in the ‘empire of signs’ (O’Reilly 2002: 11), this presents an interesting arrangement. Since they traditionally work with material generated by others – photographers, illustrators, typographers – they may feel more comfortable than those who would expect to generate work from scratch and purely from within their own creative resources. One could argue that the young graphic designers of Sivakasi are ahead in this particular game, gathering that which is already in circulation and, through re-appropriation, imbuing with new meaning. Copyright owners within global media corporations may take another view.

Not surprisingly this approach raises interesting questions of value. When the designer has relinquished the more traditional role of drawing and composition in favour of selection, cropping and re-contextualising do the works, perhaps even the role of the designer depreciate in some way? Is the creative integrity of the designer undermined when they work purely with given content? Or perhaps the only question left, as Bourriaud suggests, is how ‘to produce singularity and meaning from this chaotic mass of objects, names and references that constitute our daily life’ (2002b: 17). Certainly the production of the kantha confirms that when the designer is working with care and integrity value can be imbued into even the most humble of materials.

### 6. Conclusion

If digital technologies have created the ideal tools for the semionaut, it is the Bengali Kantha that provides an unlikely philosophical and practical model through which to frame their practice, where DJ’s and programmers join traditional village weavers in cyclical processes of transformation and renewal. The processes of unpicking and recycling images fit comfortably within this model, as the programmer gather files of code in much the same way as a weaver may unpick and collect cotton for future use.

Unsurprisingly process of unpicking digital files creates many more files: various formats, scales and colour combinations all generated from a single source. Consequently the emphasis subtly shifts from the final artefacts towards the library from where the semionaut may invent trajectories. Working from a library of digital files containing various CYMK layers of imagery derived from print waste offers multiple possibilities. As the library grows, so do the opportunities, each addition offering a new visual ingredient or platform for a new mix. In the same way that the Kantha encourages the one-off and the custom made, the collection of ‘unpicked’ channels of print waste encourages temporal and chance combinations with the democratic processes of digital production at the heart.

Yet whereas the programmer may be limited to certain screen-based outcomes, the options generated within this textile-graphic exchange are more expansive: traditional decorative forms within interiors such as wall coverings; furnishings and upholstery; fashion and screen and projections-based artworks. If context helps in some way to frame the reading of these images, then where they are applied, or as Bourriaud suggests, where they are located in the chain, seems to be a vital part of the design dialogue. Clearly the historic trade relationship between India and the UK forms an important part of this chain.

The notion of a ‘beauty by mistake’ or ‘accidental beauty’ seems to resonate with the forms derived from the waste sheets. The fractured logotypes, the marred features of brand proprietors
and the collision of disparate forms combine to offer a visual vocabulary that may be more fully reflective of a culture of advertising and print, presenting an opportunity to revisit and revise debates around the ‘grammar’ of contemporary cross-cultural ornament.

References


Bhatia, T.K. Advertising in Rural India. Tokyo, Japan: Institute for the Study of Languages and Cultures of Asia and Africa. Tokyo University of Foreign Studies.


O’Reilly, J. (2002), No Brief; Graphic Designers Personal Projects. SA: Rotovision.


