'Ever & Again' upcycled polyester shirt (2006), from the Top 100 project (2000 – 2010), by Rebecca Earley. Shirt collected by the Museum at FIT, New York, 2010

Abstract title: **Upcycling Textiles: Adding Value Through Design**

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ABSTRACT

Upcycling Textiles: Adding Value Through Design

Key words: Textile Design; Recycling; Upcycling; Sustainable Design Strategies; Technology; Systems & Services; Design Activism

The TED / AHRC funded *Worn Again* project (2005 – 2010) asked twelve designers to create recycled textile products that would have value added to them in the course of recirculation. All the research questions were concerned with exploring new approaches to the recycling of textiles; designing and producing artefacts with strong aesthetic appeal that were contemporary and innovative, and that had improved eco credentials. The project intended to explore both the 'hard' and 'soft' aspects of eco textile design, with the established principles of material and processes being considered, but also the technical and conceptual ideas. This paper reflects upon: the research questions; the research methodologies utilised and developed; and the concepts that were developed by the designers in order to arrive at a definition of the upcycling of textiles, and a set of guiding principles for best practice. The paper concludes with visions for future practice, including the *Twice Upcycled* work which explores forward recycling concepts for the polyester economy.

The research questions were:

- Ethical Production - How can designers work with ethical production values and systems to create a recycled textile product?
- Technology - How can new engineering technologies be used to create recycled textile products?
- Long Life / Short Life, or 'Fast' and 'Slow' Textiles - How can recycled materials help lengthen and shorten the life of a textile product thereby promoting resource efficiency?
- Design Systems and Services - How can new systems and services around textile recycling and recycled products be designed and implemented?
- Multifunction and Detachability – How can designers design textiles and textile products that have multiple uses and detachable elements, thereby promoting resource efficiency and product longevity?
- Design Activism – How can textile designers redefine and extend their role within the design community and consumer society?

The outcomes for the project included textile product prototypes which 'rethought' recycling textiles, through innovative practice and good design, often in collaboration with internal and external partners. Some of the prototypes and samples realised the importance of mono materiality, and the role that engineering technologies can have here. New laser applications eradicated the need for glue and adhesives, and achieved surface effects that cannot be created else where. Others realised and demonstrated that multiple lives and recycling can occur and be pre determined. The impacts of digital print, and over printing in sequential stages were also explored. Concepts relating to the ethical, emotional and systemic were integrated during a second 'redesign' stage of the project. The designers explored ideas about upcycling rather than recycling, and the project has been recognised as a leading influence in this field, recognising early on how important this approach is in terms of the economic viability of the reuse of textiles. The project explored how the designer is central to textiles 'upcycling'.

The guiding principles derived from the outcomes of the *Worn Again* project include: the consideration for the hierarchy of recycling; aesthetics and the design of upcycled textiles that are 'better' than the original; the generation of alternative and supporting actions; making enlightened material choices; understanding the different implications of using pre consumer and post consumer waste; the design for future recyclability, and if possible, future upcycling; the consideration of monomateriality, detachability, and the incorporation of the aging process; the design of textiles with zero waste; the design of textiles to maximise the benefits of the product; the consideration for scale - small is beautiful, and start local, but think global.

A final question emerged late on in the project from the research methodologies that had been developed through group workshops and tutorials for professional designers: How can designers combine eco-design principles, through workshop scenarios, to create new concepts for the creation of upcycled textile products and services? TED's TEN – design strategies and workshops that promote interconnected design thinking – were the answer, and continue to be a way for TED to communicate and inspire designers at all stages of their careers.

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PROFILE / REBECCA EARLEY

TFRC: Rebecca Earley is currently Acting Director of the Textile Futures Research Centre (TFRC), which is comprised of researchers across Central Saint Martins College of Art & Design (CSM), Chelsea / Camberwell / Wimbledon Colleges of Art and Design (CCW), and the London College of Fashion (LCF), all at the University of the Arts London (UAL). TFRC's work focuses on four over lapping and interconnected textile research areas – Design-Science, Digital, Sustainable, and Identity & Reflection. The remit of the Unit is to undertake a clearly focused range of textile related research that facilitates technology translation and convergence, improving the interface between science and design, the exploration of sustainability, the expansion of the textile product/applications, and the redefinition of cultural and aesthetic norms. www.tfrc.org.uk

TED: Rebecca is also a Reader and founding member of the TED research cluster - Textiles Environment Design - based at the CCW Graduate School, Chelsea College of Art and Design, University of the Arts London. Over the last ten years, TED has been developing a set of practice-based sustainable design strategies that assist designers in creating textiles that have a reduced impact on the environment. These strategies include both the 'hard' and 'soft' aspects of eco textile design - the established principles of materials and processes such as low toxicity/organics, new technologies and Biomimicry, along with the more conceptual ideas including short life/long life textiles, design for low launder and services design. These individual strategies have over time evolved into TED's TEN, design strategies which promote interconnected design thinking for textile design. Staff and students work collaboratively and on individual practice-based projects. TED works collaboratively with a range of partners and associates, who are integral to their activities. Sustainability is a complex subject area that covers a broad spectrum of related subjects, and this makes working in a cross-disciplinarily way, essential and vital. Recently Rebecca has acted as a sustainable textile / fashion design consultant to many small businesses, and larger companies like the PPR Group, the Gucci group, and H&M. www.tedresearch.net

B.EARLEY: Rebecca is an award winning fashion textile designer who produces hand and digitally printed textiles for her own label, B.Earley, which has retailed and been exhibited worldwide. Rebecca also undertakes public art projects and commissions, and is a facilitator and curator. Rebecca graduated with distinction from the MA Fashion course at Central Saint Martin's in 1994, and her studio began in 1995 with creating catwalk collections, moving into costume design, accessory design, public art commissions and collaborative art projects. Clients have included Bjork, Kylie Minogue, Damien Hirst, Liberty's, Whistles and Harvey Nichols, the Eden Project, and the Public Arts Commissions Agency. Her work has been collected by the Museum at FIT, New York, V&A Museum and the Crafts Council, London, the Pitt Rivers Museum, Oxford, and the Museum of Art, Rhode Island School of Design (RISD) Museum (USA). www.beckyearley.com

UPCYCLING TEXTILES: In 1998 Rebecca's interest in the environment emerged through the analysis of her own studio design and production practices, and she subsequently developed an *exhaust printing* technique, which produced hand printed textiles with no water pollution and minimal chemical usage. Since then she has continued to investigate new techniques and theoretical approaches to textile design, working on a variety of research projects including: natural indigo at the Eden Project; *Well Fashioned*, an exhibition dedicated to eco fashion, Crafts Council Gallery; *Worn Again: Rethinking Recycled Textiles,* an AHRC funded five-year collaborative practice-based research project*; and Top 100* – a long-term polyester shirt recycling project. She has been recently cited extensively for her research work with 'upcycling' textiles. www.upcyclingtextiles.net

ESTEEM: In 2006 the excellence of her research and scholarship was noted through the nomination for the Morgan Stanley Great Britons award, in recognition of her work promoting eco design in the UK. Rebecca's textile work has also attracted the following national awards: Peugeot Design Awards, Textiles (Category winner and short listed entries, 1999, 2000, 2003); New Generation Award, British Fashion Council (1996); silver and gold medals, awarded by HRH Prince Charles, Prince's Youth Business Trust (1996) and TexPrint Print Prize (1994). Rebecca's work has received extensive magazine and newspaper coverage, including features in the International Herald Tribune, Irish Times, Guardian, Independent, Telegraph, Times, Elle Decoration, International Textiles, Dazed & Confused, iD, Face, New Scientist, Crafts, Evening Standard, Design Week, Fashion Weekly & Drapers Record.

Blogs: www.textilesenvironmentdesign.blogspot.com
http://tfrcconnections.blogspot.com