

Designing products and places against crime

The promise and the challenge

Paul Ekblom

University of the
Arts London
Central
Saint Martins



DACRC is funded by

Arts & Humanities
Research Council

**DESIGN
AGAINST
CRIME**



What is Design Against Crime?

DAC uses the tools, processes & products of design to work in partnership with agencies, companies, individuals and communities to

- Prevent all kinds of **crime** – including antisocial behaviour, drug abuse/ dealing and terrorism
- Promote quality of life & sustainable living through enhanced **community safety**

It does this through designs that are 'fit for purpose' and contextually appropriate in all other respects. This sounds serious...

...but it can be fun



Most design follows a user-centred approach



But people abuse the designs!

Mistreatment (damage)

Misappropriation (theft)

Mishandling (eg fraud)

Misuse (eg as tool)

Misbehaviour (nuisance, conflict)

Mistake (false alarm)

So to the user we add the abuser



The scope of Design Against Crime

Secure...

- Products
- Components
- Systems
- Information
- Communication/ art
- Places/ environments
- Communities

Inherently secure product... in the old days...



...and now – **Vexed Generation/ Puma bike**



Evolution of a secure product – Preventing the clipping of coins



Hammered



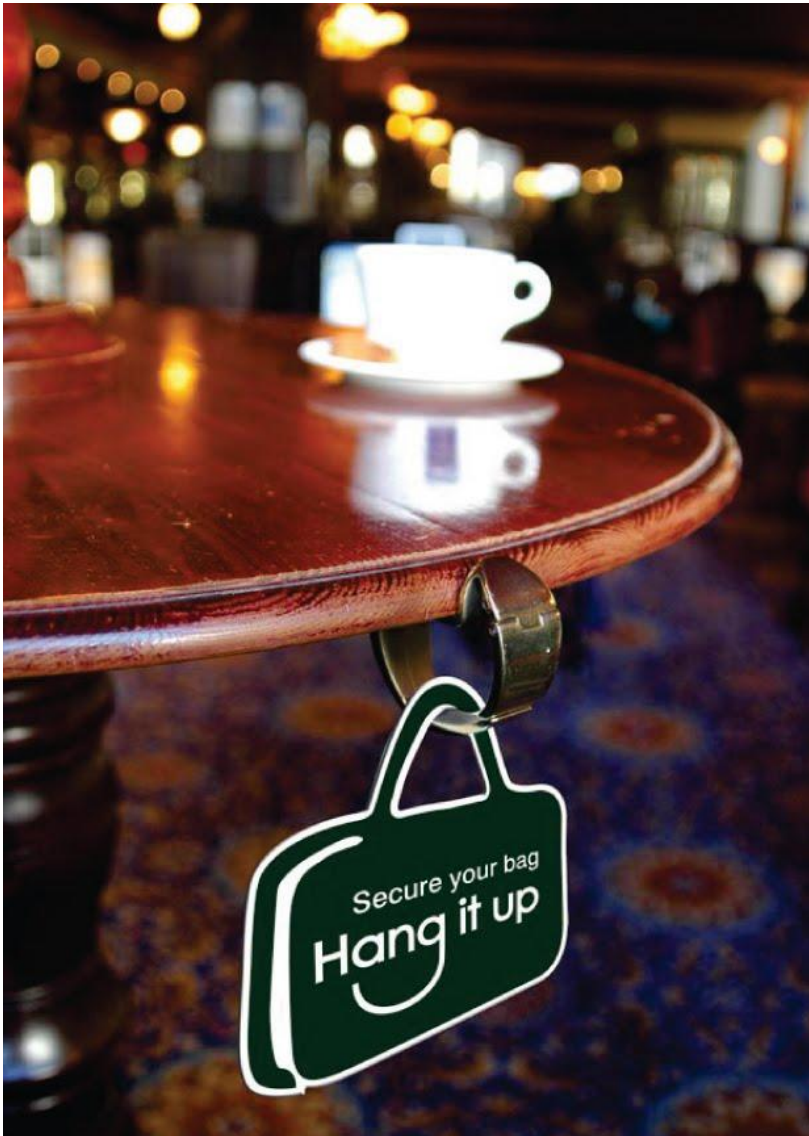
Milled

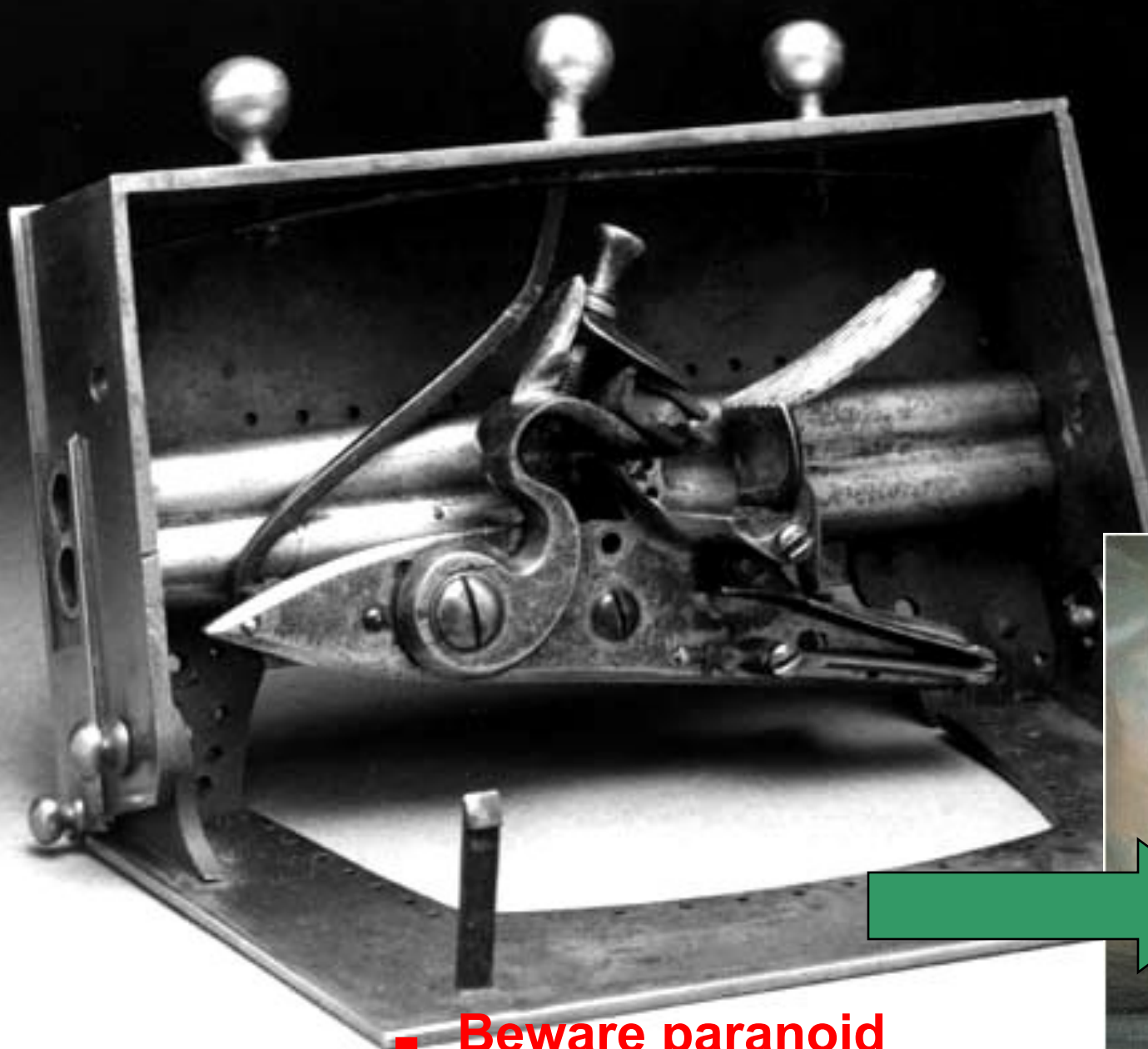
Security product – dedicated to crime prevention

Clothes tagging device



Security Product/ Security Communication





Danger! Beware paranoid products and vulnerability-led designs

Security component

- Protecting brand
- Protecting consumers



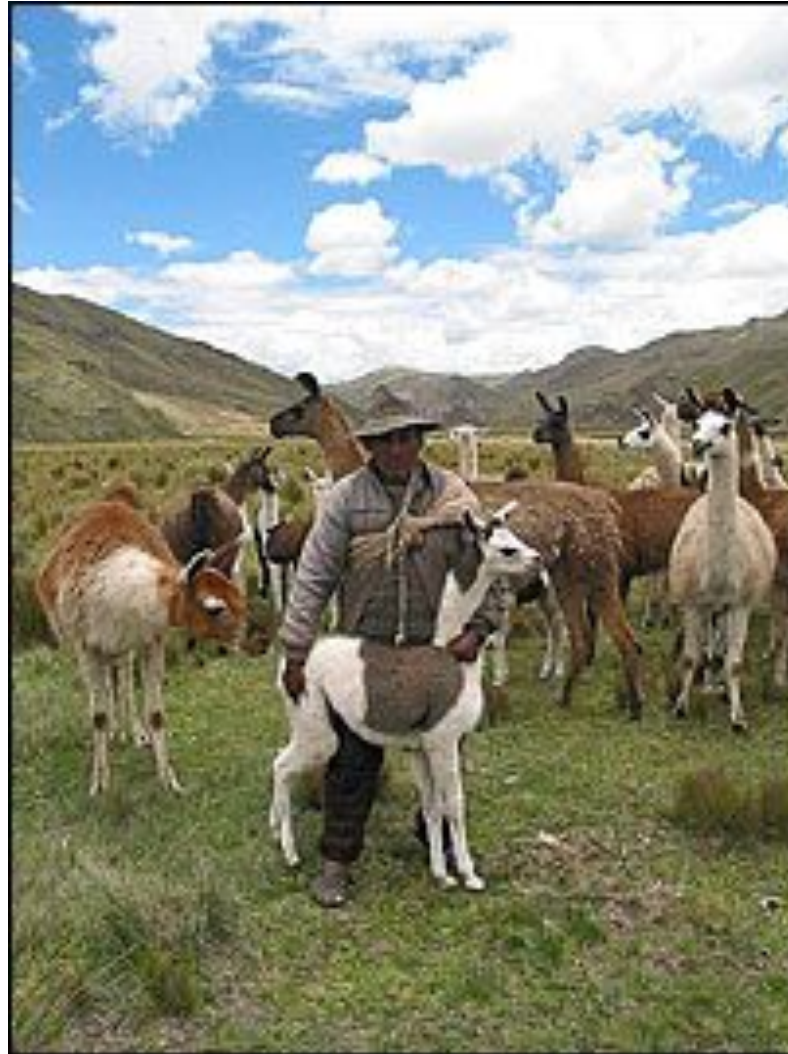
Securing products – crime prevention plus other main purpose



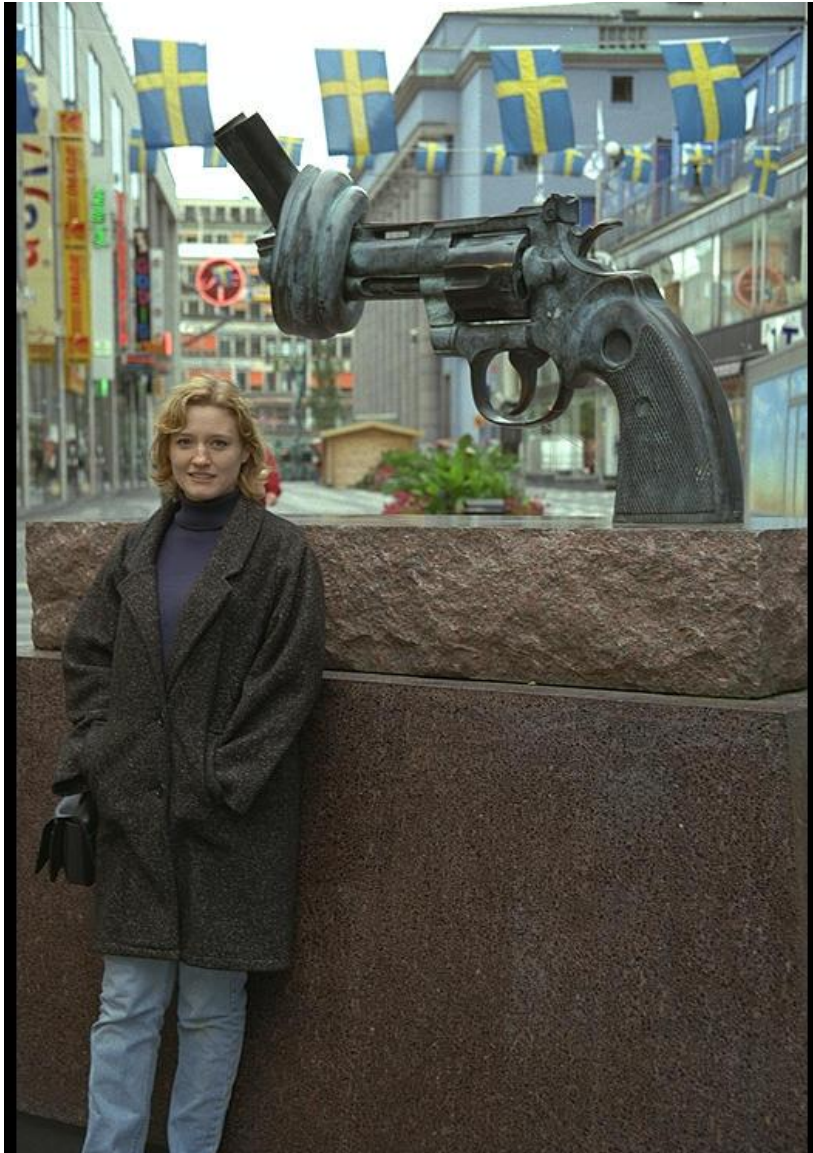
Securing products – bike stands that encourage secure locking



Security System – Chips protect high-value alpacas



Security Communication/Art



Securing Clothing – Wearable solutions



Secure Place: Maiden Castle



Secure Communities

Designing for social cohesion, cooperation and conflict reduction

- Physical aspects
- Social innovation approach



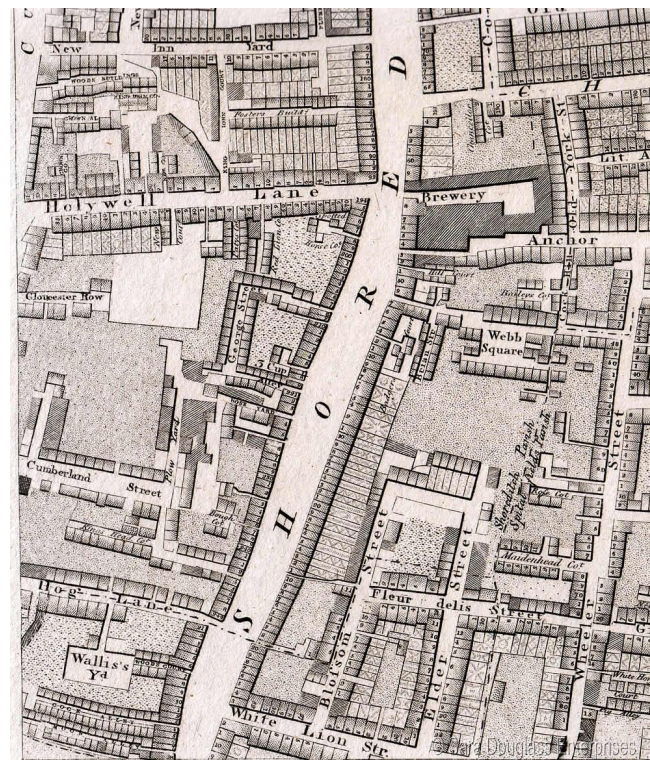
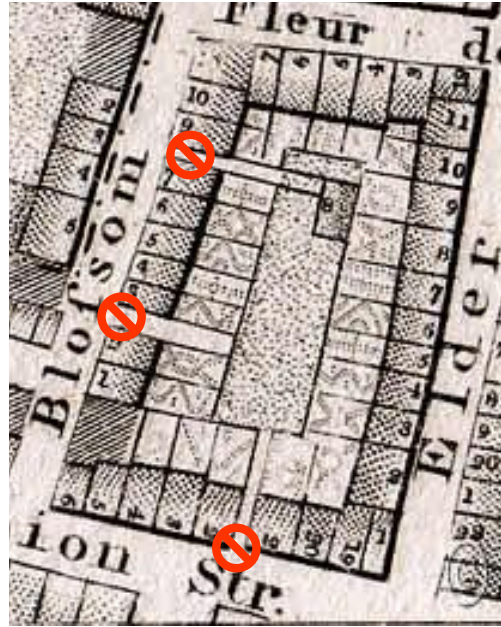
Hi-tech solution to laptop theft



Lo-tech solution



Scale of DAC



The challenge of DAC



Troublesome Tradeoffs

Can we design secure products *without* jeopardising their main purpose and *without* their being

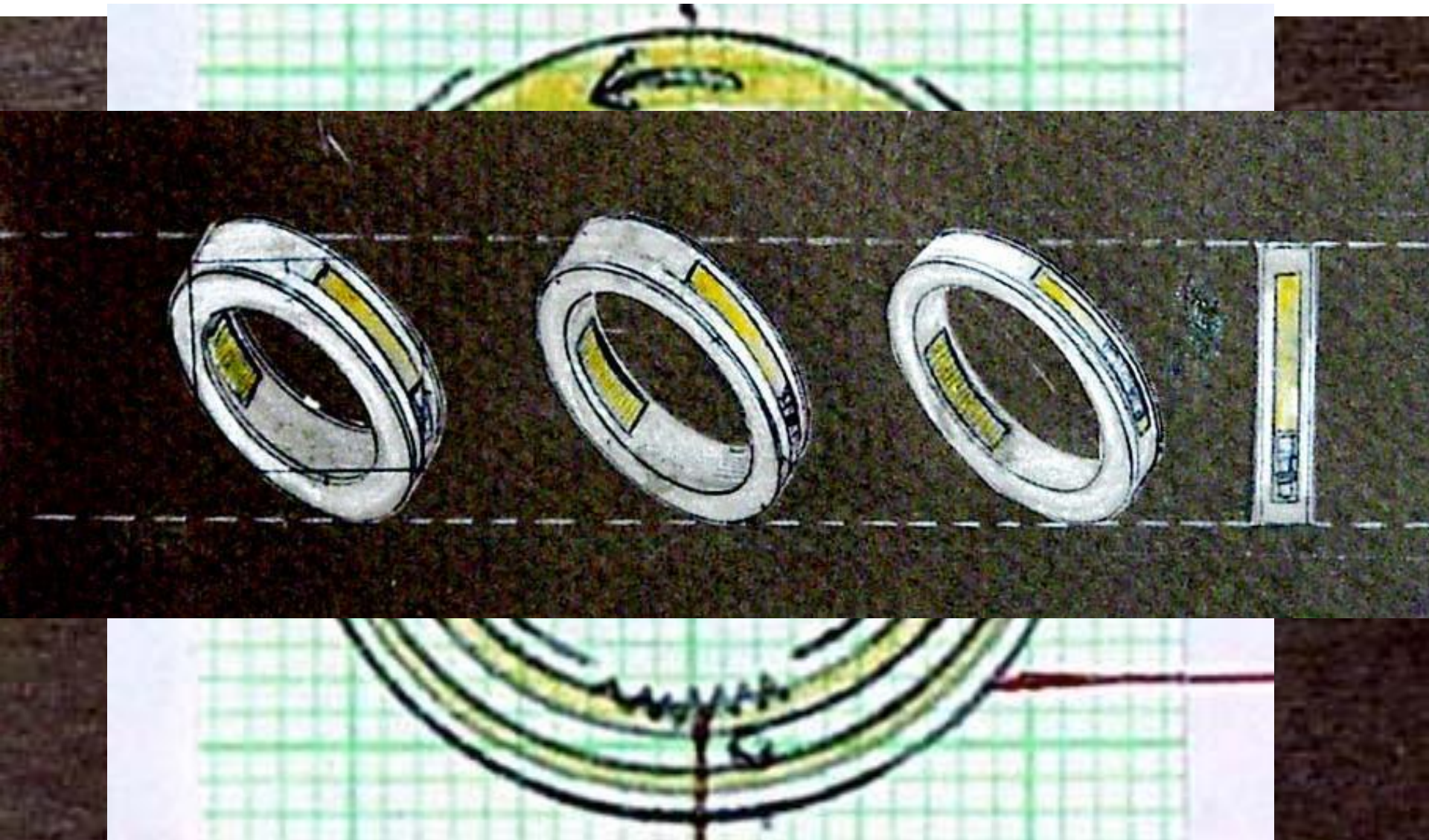
- Inconvenient?
- User-unfriendly?
- Ugly? Effective but hideous & clunky engineering solutions
- A threat to privacy?
- Environmentally unfriendly?
- Unsafe?
- Too expensive?



Yes! Tradeoffs can be resolved...

- Where Design Expertise is fully engaged, early in the Design Process
- And all these considerations are incorporated in the Requirements Capture with sufficient priority

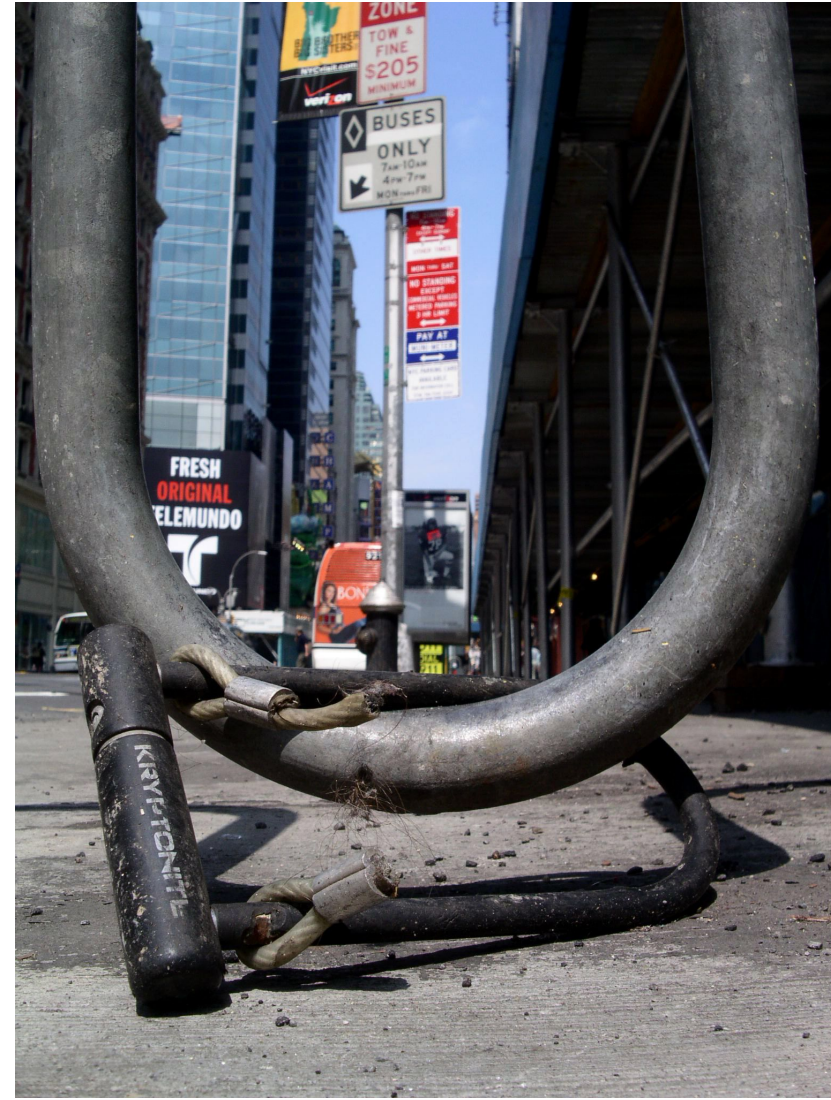
Subtle and dynamic – the ultimate tradeoff?



When is design not design?

1. The technofix

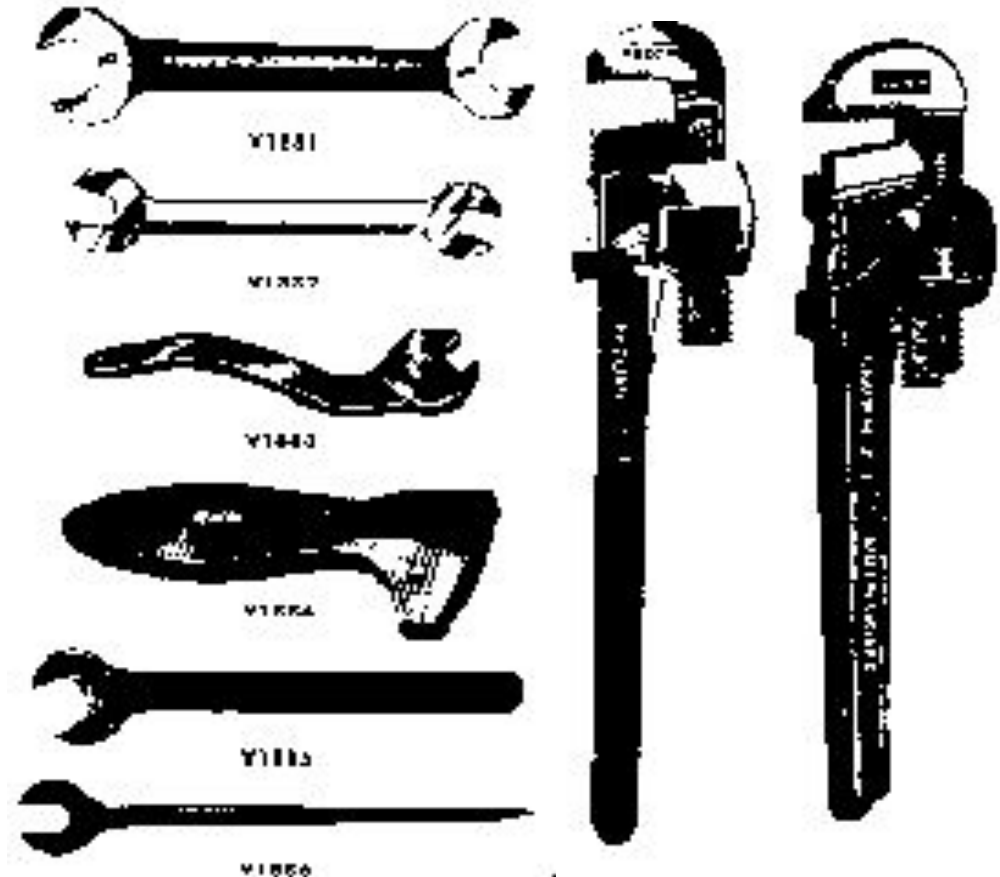
- Shallow, single, exposed line of defence
- Bolt-on, drop-off



When is design not design?

2. Heavy engineering

- Does the basic job well enough, but...
 - Clumsy, not user-friendly
 - Ugly, maybe fear-inspiring



Security need not be ugly...



...But it often is

Problem...



**'Engineering'
solution**



‘Engineering’ solutions



**More
aesthetic
solution**



More Aesthetic Solution



Problem...



More aesthetic solution



...but where do the drinkers go?

More aesthetic solution

- Traditional style
- With backup



Anti-terror aesthetics



The challenge of DAC – **Caught unaware – failure to anticipate**

- Product designed naïve to crime
- Crime harvest
- Retrofit solutions
 - Constrained
 - Rushed
 - Legacy of crime and/or inconvenience

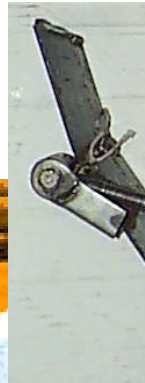




What made Queen Victoria go red?

The challenge of DAC – Offenders fight back

- Tactical countermoves
- Counter-exploitation
- Strategic counter-design
- Reverse engineering



Open to release



Close handles to pull out dents



Repair car dents quickly and easily!

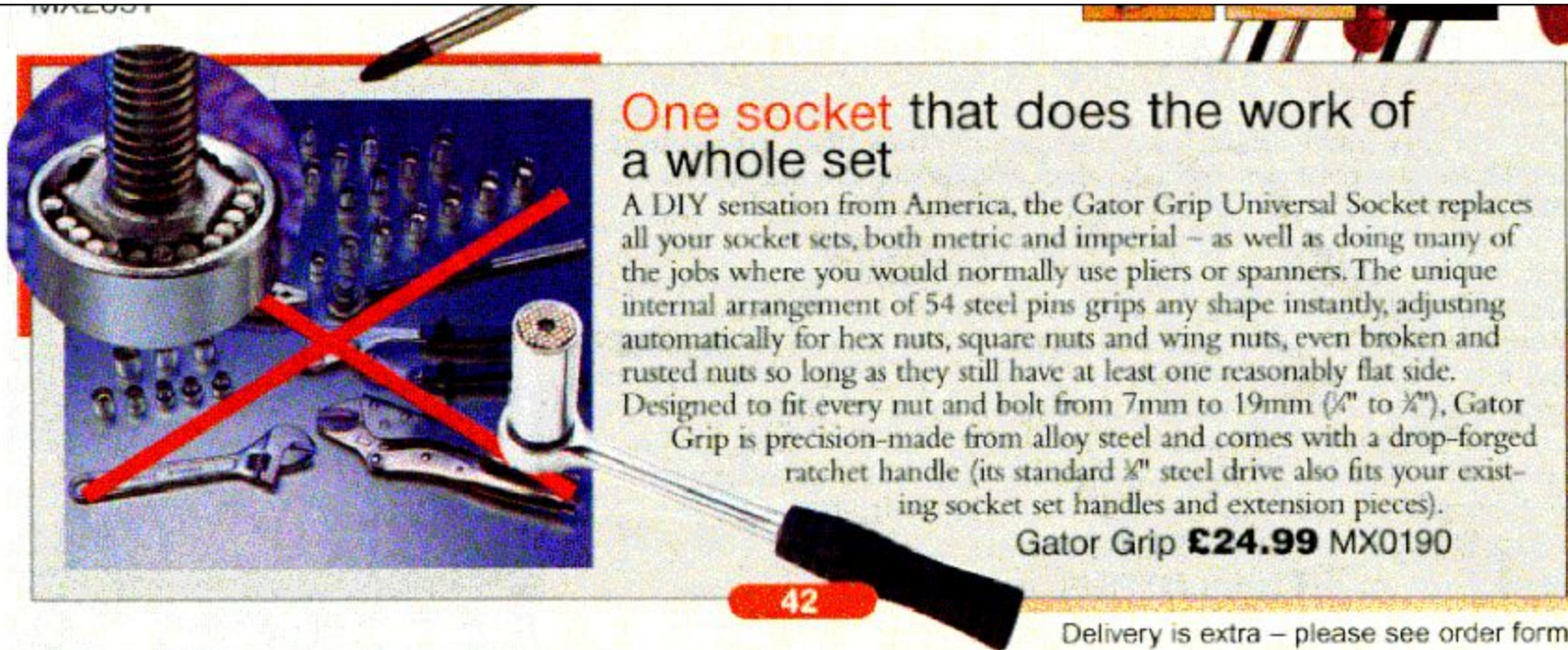
For minor dents on your bodywork the Dent Puller is the answer with vastly improved suction compared to others on the market. Simply place the cup over the dent, click the handles shut for automatic suction and gently pull out the dent. Open the handles to release the vacuum and remove without damaging the paintwork. No need to pay expensive panel beaters' bills! Can also be used to carry safely sheets of glass, metal, mirrors, etc.

Car Dent Puller Deluxe **£12.99** MX0220



The challenge of DAC – Obsolescence

- Adaptive offenders' countermoves
- Changing social conditions
- New tools/ skills for crime



One socket that does the work of a whole set

A DIY sensation from America, the Gator Grip Universal Socket replaces all your socket sets, both metric and imperial – as well as doing many of the jobs where you would normally use pliers or spanners. The unique internal arrangement of 54 steel pins grips any shape instantly, adjusting automatically for hex nuts, square nuts and wing nuts, even broken and rusted nuts so long as they still have at least one reasonably flat side. Designed to fit every nut and bolt from 7mm to 19mm ($\frac{1}{4}$ " to $\frac{3}{4}$ "), Gator Grip is precision-made from alloy steel and comes with a drop-forged ratchet handle (its standard $\frac{1}{2}$ " steel drive also fits your existing socket set handles and extension pieces).

Gator Grip £24.99 MX0190

42

Delivery is extra – please see order form.

Arms Race – Safes and Safecrackers

IR REPAIRS

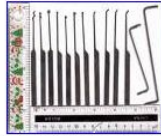


Spread of criminal know-how – from pubs & prisons to the Internet



... **lock picking** and **lock pick**
equipment
236 x 195 pixels - 6k - jpg
www.force-ten.com

[[More results from www.force-ten.com](#)]



Lock Picking 101 Guide to **Lock** ...
541 x 445 pixels - 54k - jpg
www.geocities.com



Lock Picking 101 Kit - Locksmith ...
223 x 298 pixels - 19k - jpg
www.lockpickshop.com



... get the pins out of the old **lock**
400 x 238 pixels - 28k - jpg
www.howstuffworks.com



Lock-Picking-Basics
225 x 334 pixels - 17k - jpg
www.lockpickshop.com
[[More results from www.lockpickshop.com](#)]



Lock Picking 101 Guide to **Lock** ...
1632 x 1224 pixels - 263k - jpg
img208.imageshack.us



... **lock** pick into the tubular **lock** ...
350 x 262 pixels - 34k - jpg
www.devonlocks.com



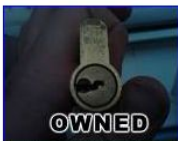
Ideal Creations **Lock Picking** ...
300 x 222 pixels - 9k - jpg
www.idealcreations.net



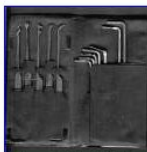
... **LOCK-PICKS-SHOP** **lock** picks, ...
193 x 166 pixels - 17k - jpg
www.lock-picks-shop.com



Lock Picking: After 2 days of talks ...
640 x 480 pixels - 65k - jpg
photos.hackinthebox.org



Lock Picking 101 Guide to **Lock** ...
1632 x 1224 pixels - 695k - jpg
img157.imageshack.us



Lock Picking 101 Guide to **Lock** ...
410 x 401 pixels - 35k - jpg
www.geocities.com
[[More results from www.geocities.com](#)]



Lock Picking 101 - **Lock Pick** Shirt
400 x 334 pixels - 17k - gif
www.hackerstickers.com
[[More results from www.hackerstickers.com](#)]



Improvised Lock Picking
150 x 194 pixels - 10k - jpg
www.lock-picking.org
[[More results from www.lock-picking.org](#)]



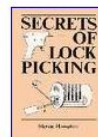
Abus spool pin
285 x 542 pixels - 103k - jpg
www.crypto.com



Guide to using our Tubular **Lock Pick**
350 x 262 pixels - 34k - jpg
www.devonlocks.com
[[More results from www.devonlocks.com](#)]



... keys and against **lock-picking**.
244 x 167 pixels - 35k - jpg
www.chex.com



Secrets of Lock Picking
181 x 254 pixels - 11k - jpg
images.bestwebbuys.com



ADVANCED LOCK PICKING SECRETS
295 x 475 pixels - 27k - jpg
www.privateinvestigators.cc



Lock Picking 101 Guide to **Lock** ...
1632 x 1224 pixels - 152k - jpg
img436.imageshack.us

Beware cookbook copying – Replications must adapt to context

ELECTRONICALLY SECURED CYCLE PARKING

GHENT, BELGIUM



WALTHAMSTOW CENTRAL STATION, LONDON



False security from rigid prescription + adaptable criminals?

‘Helpful’ entrance porch



Meeting the challenge

- We have to innovate faster than offenders whilst adapting to context of users and crimes
- This needs
 - Mindset
 - Motivation
 - Capacity development
 - Collaboration between Preventers and Designers

**A receptacle
for grime?**



**Wrong
mindset
for design:
failure to
think thief**

**Or a tool
for crime?**

Response: The No ClimBIN

Jenny Loqvist

Griffith University Australia 2008



Competition organisers

Design Out Crime Research Group
Curtin University Australia
www.designoutcrime.org

DAC Research Centre – Latest research directions

- Graffiti – art or crime?
- Elderly people, crime and built environment
- Restorative Justice and empathy
- Knowledge management of good practice in crime prevention
- Counter-terrorism toolkit
- Metal theft – collaborators wanted
- ATM crime

ATMs – our very own arms race



Machine Centred MO's

Fitting the Card Trapping or Skimming Device



PIN Observation



Remote Human Observation



Electronic Recording and Transmission

Card Skimming or Trapping



Device skims card information



Device retains victim's card

Removing or Cloning the Card



Card can be cloned using skimmed details



Criminal removes the trapped card from the device



5Is framework

Knowledge capture of crime prevention practice, explicitly designed for intelligent, context-sensitive replication

- *Intelligence*
- *Intervention*
- *Implementation*
- *Involvement*
- *Impact*

www.5isframework.wordpress.com

www.rikoksentorjunta.fi/uploads/m9i8l0e09.ppt

www.aic.gov.au/events/seminars/2010/ekblom.aspx

And finally, a reminder...



DAC doesn't have to be expensive!

Contact us at

Design Against Crime Research Centre

p.ekblom@csm.arts.ac.uk

www.designagainstcrime.com

University of the
Arts London
Central
Saint Martins

**DESIGN
AGAINST
CRIME**

