Chapter 12

Conclusion

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In this brief conclusion I will address just one key issue. The chapters in this book have certainly demonstrated the *multi*disciplinary nature of the evolving field of designing out crime from and with products. Designers and crime scientists/criminologists have shown that they can productively work together and with crime prevention practitioners to deliver more than the sum of their individual approaches. But the question remains whether design against crime and crime science (centring more specifically on situational crime prevention and problem-oriented approaches) are moving towards true *inter*disciplinarity, and whether that destination is to be sought or shunned.

This was to have been the cue for a short diversion to explore what is meant by the term. Chettiparamb (2007) rightly notes that this requires us first to understand 'discipline'; and then distinguishes three approaches to this task: the scientific-epistemological, the social and the organisational. She then identifies two main threads in interdisciplinarity. Normative orientations fill the *gaps* that disciplinarity leaves vacant; alternatively we can seek a more *theory-based* 'transcendence surpassing what disciplinarity can ever hope to achieve'(p13). Paradigmatic arguments for interdisciplinarity consider it from a more phenomenological perspective in the sense that it emanates from observations of *practice*. All of these facets are self-evidently relevant to the interdisciplinarity of crime science and

design. But it was at this point, Dear Reader, that your Editor realised that a proper treatment of the issue would require another full chapter, or even a book (indeed full understanding of interdisciplinarity seems to demand a discipline of its own!). So let's merely note that definitive pronouncements on our progress towards interdisciplinarity are a) likely to be inadequate and b) will probably stir up a hornet's nest of argument.

But it is useful, and possible, in an impressionistic kind of way, to identify some indicators, and to stir up some issues for further debate in a way which, despite the heading, will certainly not be conclusive. Chapters 2 and 9 show how concepts and perspectives of theory and causal mechanism can be brought together with the practicalities of design in a single framework. Chapter 4 shows how advance appraisal of the crime risks attendant on particular classes or instances of product can be undertaken at the design stage, and Chapter 11 instantiates this with fast-moving products. Chapter 3 gives a wider connection with New Product Development literature. Chapters 3, 6 and 10 illustrate how the technical social research-based process of evaluation can be brought together with the iterative, improvement-based approach within design. Connections with hard science and engineering start to creep in, with the technicality dimension of the Security Function Framework, and the specific technical issues of domestic electronic items in Chapter 4. But in this respect the pace will be forced by the changing nature of what is a product – as Chapter 2 noted, pervasive computing and wi-fi are steadily diminishing the distinction between a product, a place and a system.

The action-research/operations research origins of situational crime prevention (Wilkins 1997) mean that crime science has always had a strong 'doing things in the real world'

orientation; this is not such a huge leap to the 'making things' of design practice, so they are natural partners in this respect. Good partnerships should be more than the sum of their partners, and this is true in this instance.

Crime science has plenty of theory, preventive principles and generic practical methods for guiding preventive interventions based on understanding of the crime problem and causes (although classic situational crime prevention can be improved), and employing rigorous social research procedures. But *in itself* it doesn't have the capacity to convert these principles and generic methods into a reality that is practical, durable and appealing, and adapted to context in a way that resolves complex tradeoffs and serves multiple drivers well beyond the crime, security and community safety domain.

Design of course does have such capacity, and potentially in a highly generative and adaptive way that is vital for handling changing social and technological contexts and new targets or evolving perpetrator techniques. More generally it brings the 'design way of thinking' which among other things challenges assumptions about the nature of 'the problem' as initially put by dutyholders and stakeholders to the designers. Reframing, as well-described in Chapter 7, is a powerful contrast to the intense focus of crime science on proximal or immediate causes of criminal events, encouraging the watchmaker to look up from the bench and the magnifying glass to see whether better time management is actually the problem. This said, however, seasoned practitioners of problem-oriented policing are familiar with that stage where the analyst has to go back to question the validity of the original demand for action, and who among the stakeholders are making it. The ability to flip perspectives, between the narrow and the wide, the working-within-

assumptions and the questioning-of-assumptions, is a strength of both crime science and design, though design does it better and more systematically.[1]

In Chapter 7 the argument is also put forward that, in a sense, the designers didn't use, and didn't need the crime science to generate their ideas of the anti-terrorist bin; and that crime science perhaps only contributes in its ability to describe, articulate and document what was done. This is quite a challenge, because one then has to ask: of what use is the crime science if it cannot feed anything helpful back to the designers? So I think it falls to me in this conclusion to make some response. The aim is not to arrive at some sort of definitive answer but to further the debate, which is at the heart of the interdisciplinarity issue.

Nobody would deny that designers have to consider, say, the laws of physics and the physics and chemistry of materials in coming up with high-performance products (or even simply products that don't break, short-circuit or poison their users). Does that mean there is something lacking in crime science in particular? The challenge is perhaps not as strong as it might be because CPTED, the main focus of their critique, is acknowledged to be conceptually and theoretically weak in many respects (e.g. Ekblom 2011d,e,f). Other approaches, embodied within situational prevention more generally and the causal mechanism dimension of the Security Function Framework more particularly, are arguably worthier adversaries.

Much of situational prevention is a refinement of the common sense practical approach to crime that remains when the fixation with 'cops, courts and corrections' is surgically removed ('did the burglars get through the back door? Then strengthen it and improve the

layout for informal surveillance by neighbours.'). It may well be, therefore, that the designers of the anti-terrorist bin were using 'lay' crime science in their thinking, and this can get them a long way, much as can a lay appreciation of the physics of materials. But there comes a point when lay understandings are wrong or misleading, and *not* using a scientifically-validated approach will catch the designer out. Norman (2010) argues forcefully that even the best design schools do not currently prepare designers for the necessary understanding of hard and behavioural science required in today's complex world. The question then should become one of whether crime science is reliable, valid science; and whether it is articulated in a form that designers can use, as Norman doubts.

The analysis of crime problems from surveys, statistical patterns/maps, descriptions of perpetrator techniques and more qualitative data is a refined practice (e.g. Clarke and Eck 2003) whose results can be drawn on by designers, or whose methods can be used during the research phase of a design project. The benefits of a focus on causal mechanisms (whether or not these are specifically covered by crime science) are stated in Chapter 2 of this volume and illustrated in Chapter 9. The articulation of a problem in mechanism terms can help generate and focus plausible ideas, reflectively articulate what a prototype design is attempting to do and indicate what the designer should be looking out for during trials (e.g. 'Has the deterrent mechanism been triggered?'). The benefits of rigorous, sensitive evaluations, although logistically and methodologically challenging, are another benefit from crime science (although we are not without our internal debates).

But do frameworks strangle creativity? The whole issue of creativity-within-constraint is important. It may be harder to be creative in a world without the constraints of physics on

the one side, and client/stakeholder requirements on the other. The challenge is to attempt to convey, and present, the theoretical and empirical knowledge of crime science in ways that make sense to designers, and that they can use. One attempt at guidance is the Design Council's guide to designing out crime, written by the authors of Chapter 3.[2] 'Thinking thief' is my own attempt, in a rather long and peremptorily-designed slide presentation, to set out the kinds of crime science knowledge and understandings designers need in a series of progressively more structured frameworks spanning the gap between problem and solution.[3] That this guidance is not yet right for all designers (which sometimes becomes uncomfortably obvious) is not a fault of the underlying science, but of the opportunity to design, trial and improve the communication method, media and content itself.

Some may claim that genius-level, insightful designers could, and should, be able to produce the necessary goods with minimal assistance. In view of the above discussion, this is debatable. And the trouble with genius is that it's by definition in short supply. The theoretical demand for innovative capacity in design against crime is vast. Consider all those millions of products, systems, places, services and so forth being invented, designed, manufactured and deployed, all with *some* potential to be misappropriated, mistreated, mishandled, misused and misbehaved with, and conventional approaches to crime through 'cops, courts and corrections' being of limited capacity and great expense. In many cases this risk is in principle reducible by design. We may need geniuses to inspire and lead the design against crime field, but we also need to scale up by mobilising the everyday cadre of jobbing designers to routinely and effectively fit crime within their working practice. We may, as said, want to spread the design capacity even further to get everyday crime prevention practitioners to 'draw on design'. The necessary *volume* of innovative capacity

can only be delivered by a sustained attempt to develop that capacity and then build and maintain it among everyday designers and crime prevention practitioners.

There we must leave the debate – but I hope it will go on. Whether close partners in multidisciplinary embrace, or fusing together as a true interdiscipline, crime science and product design have much to offer one another, and society. They have the potential to significantly address the problem of crime whilst making minimal adverse impact on the activities and other values and needs of everyday life.

Designers, and the design space they navigate and create within, cannot be the sole focus of action to increase the amount and quality of design against crime work that is undertaken. The report commissioned by the Home Office and Design Council on the state of design against crime at the end of the last millennium (Design Council 2000; Learmont 2005) identified a wide range of enablers and constraints that needed to be addressed (and see also Clarke and Newman (2005b), and Chapter 4 in this Volume) in the career structure and organisational reward of designers; and among manufacturers and marketers who act as design decisionmakers, consumers, diverse government departments and national/international bodies who set the climate and the terms of competition. These issues also exercised the Home Office's Design and Technology Alliance against crime.[4] The operating environment of design against crime itself badly needs re-designing.

In the meantime, as practitioners of crime prevention and design you should variously think thief, draw on design, clarify your rationale, sprinkle design against crime on your food, be user-friendly/abuser-unfriendly in that order, innovate openly, package things carefully, be

socially inclusive, responsive and responsible, prepare to re-frame the problem., evaluate

rigorously, be brave... and mind how you go!

Notes

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[1] See Ekblom (2011b) for a description of the TRIZ system of inventive principles which

among much else facilitates designers of a particular product jumping up and out to address

wider systems, and down and in to subsystems and components.

[2] www.designcouncil.org.uk/our-work/challenges/Security/Design-out-crime/Design-out-

crime-guide/ accessed 30.05.11.

[3]

www.bikeoff.org/design_resource/dr_PDF/Thinking_Thief_Crime_Frameworks_PE_DAC.doc

accessed 30.05.11.

[4] www.designcouncil.org.uk/our-work/challenges/Security/Design-out-crime/The-Alliance/

accessed 30.05.11.