

laundered on different temperatures. Cotton items are commonly washed at the boil (70°C) whereas synthetics are washed at 40°C. This means that by substituting 'synthetic' fibres for 'cotton', there is considerable potential to reduce impact associated with consumer care. Indeed estimates suggest that making this switch can lead to up to 70 per cent of energy consumed in laundering being saved. Thus it seems that selecting fibres which wash well on cool temperatures and dry quickly could bring major benefits. This is, of course, dependent on consumers correctly differentiating between different material types and washing them accordingly. Further it challenges widely-held preconceptions of designers, producers and consumers that natural materials always offer the best environmental solutions.

When studies of how people sort their laundry are taken into account, it is clear that in the majority of cases, sorting is done on the basis of colour and not fibre type. These variously sorted loads are then laundered at hotter temperatures if they are white or light coloured than if they are made up predominately of dark shades. This suggests that informed specification of colour could be an effective means of reducing the impact of consumer care. This said, it is well accepted that dyeing to darker shades uses more resources and causes more pollution. So for designers looking to reduce overall lifecycle impacts, a balance needs to be struck between the benefits of reduced impact in dyeing and those of reduced impact in laundering. Without, of course, losing sight of the huge relative impact of use over production for clothing.

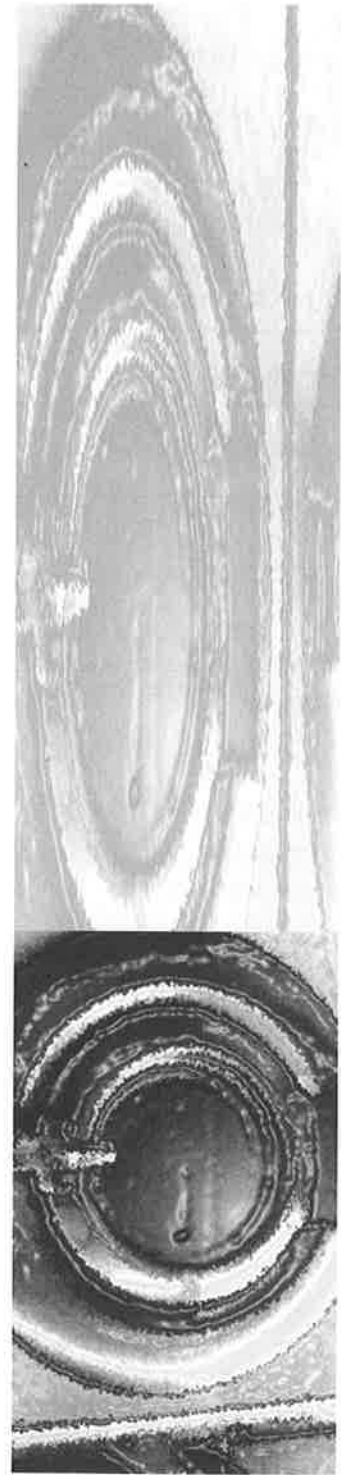
Another way to reduce the envi-

ronmental impact of consumer care is to reduce the volume of laundry. Modular design could lead to less frequent washing, perhaps by making detachable the parts of garments that get soiled most quickly. However while large households with large volumes of laundry may be positively affected by modular design, it is likely that small households would not. One or two person households (of which there are an increasing number) tend to wash when dirty items are needed rather than wait for a full load to accumulate, so would likely continue the same frequency of washing but with ever smaller load sizes.

Given that behaviour in laundering restricts the environmental responsibility of garments, one possible solution would be to design clothes never to be washed. In that way, consumer behaviour in, and attitudes towards, clothes washing would be irrelevant.

Hygienically and culturally, durable no-wash clothes are currently unacceptable. Less contentious in cultural terms, disposable clothes may offer a means to reduce environmental impact arising out of washing. Yet they provide no immediate panacea as while disposability side steps significant environmental impacts arising as a result of laundering, other impacts associated with the environmental cost of production have to be assessed.

Thus the challenges for designers in reducing the environmental impact of garments are many and difficult. What is certain is that there are no easy answers, but it seems that use (consumer behaviour) needs to be central to all decisions made in ecodesign practice. A sustainable new millennium depends on all designers recognising and acting on this. ■



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