Flameproofing Children's Cotton Nighties

Joshua Lederberg

CHILDREN'S NIGHTIES are unlikely subjects for a study that illuminates the tensions of technology and free enterprise. Such a study has, however, become a matter of urgent public concern with the shocking realization that thousands of children are badly burned each year from clothing that has caught fire.

These injuries, it may be argued, are inherently preventable by regulations that would bar flammable fabrics from the market. At the present time, children's clothing is especially vulnerable because of our taste for lightweight, fluffy garments in gaily colored cotton flannels.

However, we must not simply substitute one hazard for another. A law that might forbid putting clothes on children to lower the risk of burning is a caricature illustrating the kind of tradeoff that must, at some point, be considered even when something as precious as a child's life is at stake.

THE JOB of setting legal standards is much more difficult than reaching a determination that children ought not to be imperiled. The problem has been reviewed recently by Dr. Myron Tribus, Assistant Secretary of Commerce for Science and Technology, who brings to an important administrative role in government an unusual background and reputation in the mathematical theory of risk and decision analysis. (He was formerly Dean of the Dartmouth Engineering School.)

Most systems analysts suffer from a disease called "suboptimization." They become so enthralled by a limited part of a real-world problem that can be analyzed mathematically that they may end up generating splendid solutions to a narrow problem while immeasurably worsening another. Dr. Tribus' clarity and humility in framing what can be accomplished with quantitative standards make him stand out in his profession, and add greater weight to his analysis.

If fabrics could be flameproofed at a negligible cost, there would be no difficulty about regulatory standards. The costs are in fact substantial in relation to the price levels in a low-technology, mass-market, competitive industry. Even the cost of testing and quality control will bear heavily on the economics of such an industry, and especially on the smaller producers.

It is easy to recognize an extreme of dangerous flammability, but whatever standard is adopted must bear a real relationship to human hazard and must be accessible to objective tests. Under the stress of price competition, the producers will inevitably press hard on the standards. Flameproofing a fabric, furthermore, interferes with other consumer values like durability, style, color and washability.

WE COULD then get into an interminable argument about how much a child's life is worth in terms of a company's profits. Instead, Dr. Tribus points out that this question is actually answered by the consumer public.

If flameproofed clothing for children is too costly, mothers will make their own from unregulated bolt cloth or by converting other garments. Some "reasonable" price must then be negotiated for the value of flameproofing to deal even with the isolated problem of minimizing accidental burns.

The cost of flameproofing to a reasonable standard may not be all that prohibitive. Many children may be saved by the early adoption of a useful criterion of safety as an interim measure. To guarantee that no child is ever burned has been impossible since primitive man discovered fire.

There is, nevertheless, much to do, both in textile chemistry and in other areas like safety education and the social control of napalm, to help minimize such tragedies.