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The Great Disposable Diaper Debate

What's an environmentally conscious parent to do? To save the earth she or he forswears disposable diapers, finds a diaper service or does a lot of laundry, and feels righteous. Then along comes the shocking news that reusable diapers might be as bad for the environment as disposables.

I kid you not. When the idea first surfaced it was ignorable, because it came from Procter & Gamble (which shares with Kimberly Clark most of the nation's \$3.2 billion disposable diaper market). The company hired a consulting firm to compare the impacts of both kinds of diapers -- not only the landfilling bulk of disposables, but the water and energy demands of washables. The report concluded, "Neither product is clearly superior in all of the resource and environmental impact categories considered."

Ignorable, as I said, until that conclusion was seconded by no less an environmental hard-liner than Allen Hershkowitz of the Natural Resources Defense Council. He compiled data from all sources (the cotton manufacturers did their own counter-study) on the complete paths from cotton gin to diaper to washing machine, and from plastic factory to diaper to dump. He writes, "Disposables consume more raw materials and produce more solid waste ... but cloth diaper production and use consume more water and energy and produce more ... atmospheric emissions and waste water effluent."

Personally I'm not convinced. I'm glad the question has risen, because cradle-to-grave (oil-well-to-dump) impact analyses are exactly what we need to make responsible consumer decisions. But this example shows how difficult it is to do those analyses right.

Here are some of the facts of the case.

Eighty percent of the diaperings in this nation are done with disposables. That comes to 18 BILLION diapers a year. Each one has an outer layer of waterproof polypropylene and an inner layer of fluff made from wood pulp plus super-slurper sodium polyacrylate that can hold a hundred times its weight in water.

Those 18 billion diapers add up to 82,000 tons of plastic a year and 1.3 million tons of wood pulp -- 250,000 trees. After a few hours of active service these materials are

trucked away, primarily to landfills, where they sit, neatly wrapped packages of excrement, entombed undegraded for several hundred years.

It is illegal in most states to dump human waste in landfills. That law is simply unenforced when it comes to diapers. Theoretically they could infest the water leaching out of the dump with bacteria and viruses (polio, hepatitis, dysentery), though that has never been known to happen. Perhaps the other ingredients in leachate are toxic enough to kill human pathogens. Perhaps the diapers are so nondegradable that they don't leak their contents. Perhaps we just haven't waited long enough.

Anyway, the health impact is not the most serious indictment against disposable diapers. The main problem is the filling of landfills (though Procter & Gamble remind us that diapers account for only two percent of the nation's municipal solid waste). A secondary problem in political minds, a primary one in the minds of environmentalists, is the waste of resources and the trail of pollution at every stage of the manufacture and disposal of the diapers.

Hershkowitz's data show that disposables use 10 times more resources (measured by weight and including fuels) than cloth diapers and produce 50 times more solid waste. But disposables use only half as much energy and two-thirds as much water. Cloth diapers save landfills but load washing machines and sewage systems (by putting sewage where it belongs).

Those facts are sound, but, I think, misleading and incomplete. Incomplete because they don't begin at the very beginning, in the cotton fields, the forests, and the oil wells. Misleading because poundage is not the way to compare either resources or pollutants.

A pound of wood pulp from a forest managed sustainably is more benign than a pound from a forest that has been raped and eroded -- and much preferable to a pound of irreplaceable oil. A pound of dioxin from chlorine bleaching in a pulp mill is far more dangerous than a pound of sulfur dioxide from a coal-burning power plant that runs a washing machine.

We are comparing apples and oranges here -- and cotton pesticides, eroded soil from cotton fields, emissions from logging trucks, oil spills, hazardous wastes from refineries and petrochemical and plastics plants. None of the analyses so far comes close to including all these environmental impacts, much less properly comparing their dangers.

I haven't done the analysis either, but I know enough about cotton growing, petrochemicals and pulp mills to suspect that 1000 changes with disposable diapers add up to much more environmental hazard than 1000 uses of cloth diapers. But I can't be sure.

It's great to try to move our lives in the direction of ecological righteousness, but it's also true that every human activity has environmental impact -- especially the activities of that fraction of the human population rich enough to have diapers of any kind. From the earth's point of view it's not all that important which kind of diapers you use. The important decision was having the baby.

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