

Shifting Paradigms: Science, Policy and Consumer Preferences

Sustainable Cosmetics Summit

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I'd like to start out by telling you a little about myself; about who I am and who I'm not. I'm not a scientist, chemist or product formulator. I don't sell or market any products. So I guess you could say I'm a beauty industry outsider, except that, like most American women, I've had an intimate connection with the beauty industry since the time I could see and hear.

I grew up in a Procter & Gamble family with Tide, Crest and Cover Girl. As I confessed in my book, I was obsessed with Seventeen magazine and spent lots of time in the Osco Drug cosmetics aisle searching for the perfect products that would magically transform me into the confident, lovable version of myself.

I never thought about what was in those products until many years later, after a journey that took me through almost a decade working as an investigative reporter in Colorado where I published a newspaper and then to DC to work as communications director of an international environmental group called Health Care Without Harm. There I worked with leading scientists, MDs, and huge health care systems that were saying to their suppliers that they don't want to buy products for their hospitals that contain phthalates or other chemicals that pose a risk to human health.

Ten years ago, we were among the first groups to research and report on phthalates in beauty products and other toxicity concerns, along with partners at Environmental Working Group, Women's Voices for the Earth and later the Breast Cancer Fund and others who formed the Campaign for Safe Cosmetics.

The Campaign is now comprised of eight non-profit organizations, with more than 150 supporting groups, such as American Nurses Association, National Organization for Women, MomsRising, Physicians for Social Responsibility, faith and labor groups. We have an active online network of more than 100,000 people and EWG's Skin Deep database logs more than 1 million searches per month. We have had a major impact on bringing the conversation about non-toxic personal care products to public awareness.

From this perspective, I want to talk to you about three key drivers that are shifting the business of the beauty industry – new paradigms in science, policy and consumer preferences.

1: NEW SCIENCE PARADIGM

To sum this up: We didn't used to know what we know now about the various and subtle ways that synthetic chemicals can impact human health. Now that we know, what are we going to do about it?

You've probably heard the old adage, "the dose makes the poison" – the theory (coined by Paracelsus in the 1500s) that substances considered toxic are harmless in small doses, whereas ordinarily harmless substances can be deadly if over-consumed.

For example, "a little salt on your peas or tomatoes can be good ... too much can be fatal" – that's an actual quote from a beauty industry representative explaining to the New York Times why parents shouldn't be concerned about cancer-causing chemicals in baby shampoo.

But carcinogenic chemicals on the baby's head aren't at all like salt on peas. And science has come a long way in the last 5 centuries. Now we know that it's not the dose that makes the poison, but many other factors must be considered when calculating risk, such as:

- Timing of the dose – exposures that occur in the womb or during other critical windows of development (such as early childhood or adolescence) can have profound health effects at low doses.
- Size of the person -- children and babies are more vulnerable to toxic exposures than the 250 pound adult male that most risk assessments are based on (if they are conducted at all)
- Toxicity of chemical mixtures – chemicals in combination can have different or enhanced effects than single chemical exposures. For example there is evidence that certain phthalates, when mixed together, are exponentially more toxic than exposure to a single phthalate.

We also know:

- Extremely low doses of some chemicals can have a major impact on the body, particularly when exposures disrupt the endocrine system during critical windows of development. At tiny doses, these chemicals can mimic or block the body's hormonal messaging systems, scrambling up the signals for normal development and bodily functions.
- Low doses are adding up: many children, adults and pregnant women are being exposed to multiple carcinogenic and endocrine-disrupting substances from various household products -- shampoo, body wash, fragrances, cleaning products, plastics, etc. – as well as air, food, water and other sources in the same day.

In order to understand risk, “researchers should evaluate the effects of low-level exposures to combinations of potential carcinogens, as well as exposures that may begin in utero and extend through a lifetime,” stated to an editorial in New England Journal of Medicine. But this is not how chemicals are currently assessed for risk; therefore, obviously, the risks are not well understood.

The second big problem is that most chemicals are not assessed for risk at all.

- Under current law, cosmetics companies are not required to assess the risk of chemicals in personal care products.
- Of the 85,000 synthetic chemicals currently on the market, 90% have no human health data. Only 200 have been adequately studied for carcinogenicity.
- Less than 20% of chemicals used in cosmetics have been assessed for safety by the cosmetics industry's safety panel, the Cosmetics Ingredients Review.

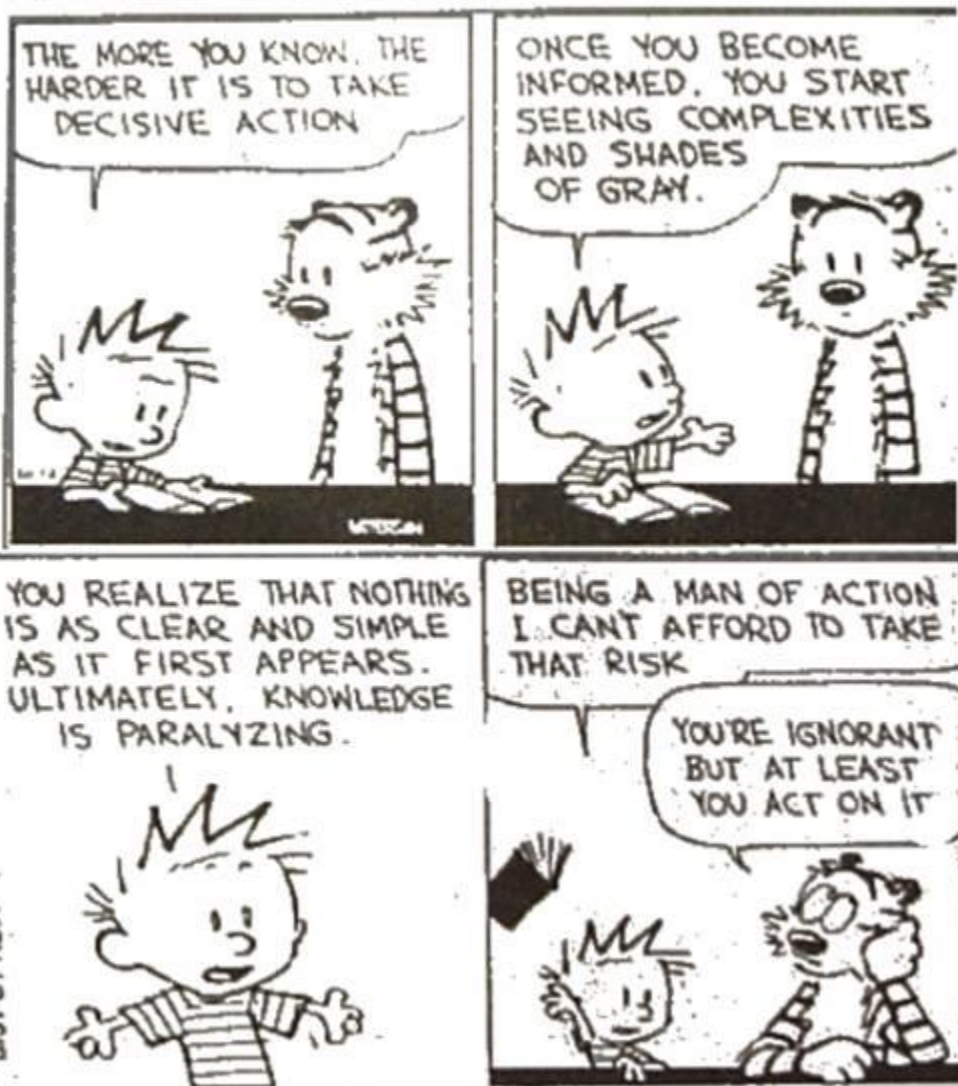
Even when risk assessments are conducted, there is often not enough data available to make credible assessments. Here is the traditional risk assessment equation: Risk = Hazard X Exposure

The problem is, our regulatory system encourages ignorance on all parts of this equation. Risk assessments are not required in the first place, but even when they are conducted, how is it possible to figure out the answer (risk) without adequate data about how hazardous the chemical is and how much people are being exposed to it – data that typically doesn't exist.

It reminds me of the time the Cosmetics Ingredient's Review panel was trying to figure out how much people are being exposed to phthalates from cosmetics by calculating figures on the back of a lunch napkin. Under the current system, companies can plug in any numbers into the risk assessment equation and come up with a value of "safe."

It's a system based on ignorance: as long as we don't know what we don't know, we can keep on doing things the way we've been doing them. As I was pondering this problem, I did a Google image search for "ignorance" and came up with this cartoon of Calvin & Hobbes:

CALVIN AND HOBBS



This is the context in which companies have a choice to make about how they respond to new knowledge from current science. Many companies are recognizing the limits of risk assessments and choosing to take a precautionary approach, avoiding hazardous chemicals in the first place. And then there are those who say they can't afford to take that risk -- they'll keep putting hazardous chemicals into products used by infants and pregnant women until somebody else proves the danger.

Here's what we do know:

- At least 1/3 of personal care products contain a chemical linked to cancer, and many more contain hidden carcinogens that are not listed on labels – such as the formaldehyde and 1,4 dioxane found in children's bath products <http://safecosmetics.org/toxictub>.
- Chemicals with the potential to disrupt hormones are found in the large majority of personal care products. A study of teenage girls found an average of 13 hormone-disrupting cosmetic chemicals – including parabens, phthalates, triclosan and synthetic fragrance musks – in their urine. <http://www.ewg.org/reports/teens>.
- Dangerous heavy metals such as lead, arsenic and cadmium have been found in a wide variety of cosmetic products including lip gloss. <http://environmentaldefence.ca/reports/heavy-metal-hazard-health-risks-hidden-heavy-metals-in-face-makeup>
- In the United States, cosmetic manufacturers are allowed to put nearly any chemical into personal care products in unlimited amounts with no required safety studies and no follow up health monitoring. The system for cosmetic safety in the U.S. is “trust the companies.”

These problems are prompting a second major paradigm shift that is changing the beauty industry.

2: NEW POLICY PARADIGM

The current policy situation in the United States – near complete lack of cosmetic safety standards -- is harming the credibility of the cosmetics industry. Consider this recent story posted on Wall Street Journal blog: “10 Things the Beauty Industry Won't Tell You.” <http://online.wsj.com/article/SB70001424052748703922504576273352212459530.html>

The first two things: “Regulated? Lightly” – the fact that the industry is barely regulated which is a surprise to most consumers; and “Competent? Maybe not” – pointing out the reported injuries and lack of safety training in salons. Consumer awareness about the lack of standards is catching up with the industry, along with regulatory changes in other countries that are forcing changes for U.S. companies and further increasing consumer awareness about the industry's toxicity problems.

Global regulatory policies are moving in the direction of precaution, transparency and new knowledge.

Precaution: Europe and others are saying, let's not argue about what levels of toxic chemicals are safe to put into cosmetics (since there is insufficient data to back up safety claims), instead, let's figure out how to make products without using chemicals of high concern. Several recent examples in the law:

- EU Cosmetics Directive bans from cosmetics chemicals that are known or highly suspected of causing cancer, reproductive harm or genetic mutation. At least 30 countries followed suit.
- Health Canada is developing a Hot List of chemicals that should not be used in cosmetics.
- Japan and Sweden banned formaldehyde-releasing preservatives which are widely used in American products, especially children's products.
- Europe and Canada have limits on formaldehyde in cosmetics.
- The French Parliament is backing a policy to ban phthalates and parabens from cosmetics.
- Denmark banned parabens from all skin care products from children and babies under 3.

Environmental groups in the United States will continue to pressure companies that continue to use hazardous chemicals in American products that are being banned in other countries.

Transparency: Consumers have a right to know what's in the products we put on our bodies. Due to major loopholes in labeling law, companies are not required to disclose fragrance ingredients or the carcinogenic contaminants that are commonly found in personal care products.

- Europe is now requiring labeling of 26 fragrance ingredients linked to allergies. The fragrance industry trade association IFRA has voluntarily published a list of the 3,000 ingredients that may be used in fragrance. These efforts fall far short of full disclosure.
- The Campaign for Safe Cosmetics is working with a group of 200+ companies that have agreed to fully disclose all product ingredients including fragrance components – obviously it can be done and this is the direction the whole industry will eventually go.

New Knowledge: Toxicological data about thousands of chemicals will become available over the next decade due to the European Union's REACH legislation. Smart companies will be paying attention to the emerging science and making precautionary decisions to avoid chemicals of highest concern.

- EU has announced the first six substances to be banned under REACH, including three phthalates and musk xylene.
- As the EU adds chemicals to the CMR list (list of carcinogens, mutagens, reproductive toxicants) those chemicals will be automatically banned from cosmetics due to the EU Cosmetics Directive Seventh Amendment.

The United States is far behind other countries.

- No required safety assessments for cosmetics or most industrial chemicals.
- No safety standards for cosmetics
- Very few bans; no limits on levels of hazardous chemicals that can be present in cosmetics.
- Lax labeling laws that are not enforced and do not require disclosure of fragrance chemicals.

The federal Safe Cosmetics Act, first introduced to the U.S. Congress in 2010, seeks to change that by:

- Restricting or phasing out chemicals linked to cancer, birth defects and developmental harm
- Creating a health-based safety standard for cosmetics that includes protections for children, the elderly, workers and other vulnerable populations
- Closing labeling loopholes by requiring full ingredient disclosure on product labels and company web sites, including the constituent ingredients of fragrance and salon products
- Requiring data-sharing to avoid duplicative testing and encourage alternatives to animal testing
- Providing FDA Office of Cosmetics and Colors resources it needs to provide effective oversight of the cosmetics industry, including recall authority for cosmetics.

Many companies are already well down this road of precaution and transparency. In 2004, we asked companies to sign the Compact for Safe Cosmetics and more than 1,500 companies signed up. This fall we will announce the hundreds of companies that have complied with the pledge. These companies are leading the way with best practices and showing it can be done.

These Compact compliant companies:

- Do not use chemicals banned in EU
- Screen their products for hazardous ingredients and replace with safer alternatives
- Fully disclose ingredients including fragrance components.
- Track their progress publicly via the Skin Deep database.

Other non-legislative policies that are driving change in the industry include retailer policies such as those at Whole Foods and other retailers that are creating internal chemical policies.

Retailer Policies:

- Whole Foods Premium Body Care Standards are based on precaution: some 400 chemicals are not allowed, including phthalates, fragrance, parabens, ethoxylated chemicals, formaldehyde-releasing preservatives and other chemicals of concern commonly used in beauty products. Many companies have been quietly reformulating to meet the Whole Foods standards.
- Whole Foods is requiring all products marketed as “organic” to comply with U.S. Department of Agriculture organic standards.
- Target has indicated it is considering adopting Whole Foods Premium Body Care as a standard for natural products.
- Wal-Mart announced late last year that it would begin requiring suppliers of hundreds of thousands of products to disclose the presence of over 3,000 “chemicals of concern.” The expectation is that the giant retailer could quietly drop problematic products from its stores

Priorities moving forward for the Campaign for Safe Cosmetics

- **Transparency:** including fragrance ingredients, salon products
- **Precaution:** removing known hazards and moving to safer alternatives:
 - phthalates
 - triclosan
 - formaldehyde releasers
 - ethoxylates
 - hormone disruptors
 - salon exposures
- **New Knowledge:**
 - Companies need to watch REACH data and emerging science
 - Environmental groups are pursuing legislation that would require safety assessments for industrial chemicals (via TSCA reform and EPA) and cosmetic chemicals (via the Safe Cosmetics Act and FDA)

3. NEW CONSUMER PARADIGM

Awareness about the health threats of chemicals in our daily lives has reached the mainstream, big time. Consider these opening lines from a feature story in the April 2011 issue of Glamour magazine: “If you’ve read the news lately you’ve probably stumbled across headlines about the health risks posed by chemicals in your sports bottle, personal care products or food containers ... Just how concerned should we be? Very, say 13 prominent experts interviewed by Glamour. “

Concerns about chemicals in cosmetics have been covered by nearly every major news outlet. Just a few recent examples in the past two months:

Wall Street Journal: <http://www.safecosmetics.org/article.php?id=833>

Time magazine: <http://healthland.time.com/2011/04/13/warning-getting-your-hair-straightened-could-be-hazardous-to-your-health/>

CNN: <http://www.safecosmetics.org/article.php?id=803>

Chicago Tribune: <http://www.chicagotribune.com/features/tribu/julieshealth/chi-hurt-by-cosmetics-tell-the-feds-20110331,0,111152.story>

Associated Press: <http://losangeles.cbslocal.com/2011/04/12/feds-investigate-safety-of-brazilian-blowout-treatments/>

The increasing media coverage, along with the paradigm shifts of the new science and new policy approaches, is creating a new type of consumer – the New Conscious Consumer. (Also see my paper, [“Three Characteristics of the New Conscious Consumer”](#))

When these consumers think about “green” or “sustainable” products, they are thinking about health – about breast cancer risk, fertility and healthy children. This is a huge and growing market.

- Deloitte 2011 survey: #1 concern for consumers for household products: Safety
 - Personal Care Products 57%
 - Cleaners/detergents 56%
- Packaged Facts 2009 survey: Rapid growth in naturals market “a consumer reaction to concerns about the health and safety of chemicals used.”
- Mintel 2009 survey: Sales of Green Personal Care Products:
 - Increased 18% between 2006-2008
 - Recorded + growth despite the economic downturn while other segments declined
 - Expected to outperform the market for conventional personal care products in terms of sales growth.
 - Lack of consistent standards ‘can only undermine the appeal of the segment as a whole’. If a clear definition of ‘natural’ and ‘organic’ existed for personal care, the market, this would help to ensure the long term future of the industry.

Are you ready for the New Conscious Consumer?

2010 data from EcoFocus Worldwide survey of 4,000 Americans:

Eco Aware Moms are:

- 69% of moms
- Have \$1.45 trillion in buying power
- Survey data describes a “powerful new archetype” of the 21st century consumer

<http://ecofocusworldwide.com/?p=860>

Eco Aware Teens – watch out for these folks, they are deeply educated, tech savvy and ready to take action in ways that give me a lot of hope for the future.

In closing, I want to tell you a story about Emily, a senior in Marin County, California, and an eco aware teen who represents to me the deep commitment and big spirit of the new conscious consumer. I first met Emily two years ago back when she was really shy. She's not shy anymore. For the past two years, Emily has worked with Teens Turning Green, learning about the science of chemicals and how to organize her community. Emily decided she was angry about what was happening at a particular corporation. Does anyone recognize the ad for this company?

If you've been inside an Abercrombie & Fitch, you've heard the thumping music and smelled the stench of cologne because they spray that place down every 30 minutes, as part of their branding, with Fierce Cologne. Emily wanted to know what was in that stuff they were spraying all over the place, so she asked the Campaign for Safe Cosmetics to test Fierce cologne as part of a cohort of fragrances we tested at an independent lab for our Not So Sexy fragrance report. <http://www.safecosmetics.org/notsosexy>

We discovered that Fierce cologne contained eight sensitizing chemicals that can trigger allergic reactions such as wheezing, coughing, headaches and asthma. Fierce also contains diethyl phthalate, a chemical linked in human studies to damaged sperm in men and to feminized genitals in baby boys.

Harvard Study: <http://humrep.oxfordjournals.org/content/22/3/688.full>
Univ. of Rochester study: <http://www.ncbi.nlm.nih.gov/pubmed/16759976>

How ironic that Abercrombie & Fitch markets itself with images of male virility and yet they are spraying the place down with chemicals that may have the opposite effect on male reproductive health.

Emily decided she wanted to do something about this so she organized a group of students to protest at the A&F store in downtown San Francisco. About 20 teens, boys and girls, wearing gas masks and medical masks and carrying signs criticizing A&F's Fierce cologne marched on the S.F. store; they marched inside the store, chanting and wearing medical masks, and they got kicked out of the store.

Abercrombie kicked all the customers out of the store too and barred the doors, while several police cruisers showed up on the scene. And there was Emily, standing in the middle of a large crowd of people, just her and a very tall police officer who was looking down at her and lecturing her that if she went back in the store, she would be arrested for trespassing.

Emily just stood her ground and looked up at the officer and said "Trespassing?" and pointed out that they are the ones trespassing on her, trespassing on her right to health and her right to breathe clean air – what were the cops going to do about that?

What a beautiful sight, to see a teenage girl standing her ground against a huge corporation, speaking her truth, surrounded by a supportive community. That's the energy that is going to change the world, that's the new conscious consumer.

Thanks to all of the Emilys out there. May we all find our own inner Emily who will stand up for what's right and not back down as we create the new economy – one that is compatible with life and healthy for people and the planet. Thank you. Please join us: <http://www.safecosmetics.org/businesses>