

Biotechnology: A Risk Communication Perspective (p. 1)

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1. Accept that biotechnology is an extremely high-outrage risk.

It is involuntary, unnatural, and unfamiliar; memorable, dreaded, and catastrophic. Uncertainty is high, and individual control is low. Many see it as a moral transgression as well. And biotechnology industries have exacerbated the outrage with a record of untrustworthiness and unresponsiveness.

2. Notice that biotechnology affronts both left and right.

In general, the left tends to be cautious about ecological risk, casual about sociocultural risk; the right has the opposite worry agenda. Almost unique among technologies, biotech strongly raises both sets of concerns.

3. Take biotechnology hazard seriously.

Many high-outrage risks are demonstrably low-hazard, but biotechnology may well be high-hazard as well; high-consequence (though low-probability) scenarios abound. A company that considers biotech risks trivial disqualifies itself. Acceptance will be higher for a company that asserts that both risks and benefits are huge, that cautious forward progress is the only answer.

4. Recognize public acceptance as a bet-the-company issue.

In part because they focus on products and markets rather than manufacturing facilities, controversies over biotechnology are likely to be more global and more fundamental than most risk controversies. The threat to corporate reputation extends far beyond the potential failure of the bioengineered product. Companies should not invest heavily in biotech without investing heavily in their relationships with stakeholders.

5. Understand individual concerns as a stand-in for global concerns.

Many people sense that biotechnology may threaten ecosystems and social systems, then convert this into an exaggerated fear of individual consequences from particular genetically modified organisms. Dismissing or disparaging these consumer concerns misses the point. See them as a sort of “unconscious altruism,” standing in for bigger and more justified concerns.

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6. Support individual choice.

Among the rules governing the diffusion of innovations is this one: Most people want to keep an eye on the new technology for a while before they try it themselves. Successful innovations are either invisible to the public or controllable by the individual. Well-organized opponents and growing public concerns assure that biotechnology will not be invisible. Individual choice is the only available option.

7. Support labeling.

The most crucial source of individual choice for biotechnology is labeling. Public acceptance will be faster and surer if people feel they will not be unknowingly exposed to GMOs. Where labeling is feasible, industry opposition is self-defeating. Where labeling is unfeasible, the battle for acceptance will be much tougher. Product development choices should be made with this distinction in mind.

8. Acknowledge huge fears and real risks.

The science fiction scenario of the rogue gene that destroys the planet lurks just beneath the surface in all biotechnology controversies. Surface it and acknowledge its universality. Then distinguish it from smaller setbacks – and acknowledge the latter as not only conceivable but likely. If industry treats all negative outcomes as hysterical sci-fi foolishness, it has only itself to blame when confirmation of manageable problems (the monarch butterfly study, for example) is seen as confirmation of disaster.

9. Accept that regulators and critics must have a major role.

Many who see biotechnology as beneficial or inevitable are nonetheless reluctant to leave it in the hands of industry. Free-market demands for less regulation miss the point that the free market is in fact demanding more regulation. Similarly, NGOs critical of biotech must participate in “taming” it. These NGOs needn’t win the war and needn’t convert to supporters – but for the public to become more supportive it needs to see them win some battles.

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10. Lean on size and traditionalism.

Despite the romance of entrepreneurship, the image of a start-up in a garage releasing that disastrous rogue gene is intolerably alarming. Ironically, companies that seem big, hidebound, traditional and slow-moving may be more acceptable avatars of biotechnology – partnered with smaller and more nimble companies, perhaps, but protective of old strengths. “Lumbering cautiously into the 21st century” isn’t a bad vision.

11. Don’t let bad actors hold you back.

An industry that coordinates its approach to controversy risks choosing an approach dictated by its dinosaurs – or, in the case of biotechnology, by a company that moved out ahead and stumbled badly. A competitor that pioneers a more transparent, collaborative, and humble approach, if it works, will have a short-term competitive advantage, after which other companies will adopt the model. The pioneer doesn’t have to attack its less-open peers, but it does have to distinguish the two approaches explicitly.

12. Acknowledge uncertainty.

No one can say with confidence where biotechnology will take us. The possibilities are boundless and the risks are commensurately immense. Acknowledging that this is so, and that you wish (and everyone else wishes) it weren’t so, will generate less outrage than pretending you have the answers. But don’t overstate the uncertainty either. You do have some answers.

For more about my take on this issue, see:

- Biotech’s bitter fruit (Mar 1999) – www.psandman.com/articles/selinger.htm
- Sowing the Seeds of Suspicion (May 2000) – www.psandman.com/articles/sowing.htm
- From the Director (Third Quarter 2000) – www.iaa.msu.edu/absp/links00-3.html
- GM foods and risk communication (Jan 2003) – www.psandman.com/gst2003.htm#hoban

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