

Communicating Risk

CMJ 404

March 26, 2020

Today's Class

1. Announcements/Questions
2. Trust (Slovic)
 - Credibility (“interpersonal trust”)
 - Asymmetry principle
3. Social amplification of risk framework (Kasperson et al.)
 - Amplification vs. attenuation
 - Social station of amplification
 - Group or behavioral response
 - Ripple effect
4. Case study: silicone breast implants (time permitting)

Announcements

- Review the revised syllabus (and video explanation) under “Content” on BB
- Late Public Meeting #1 assignment
- Office hours (via Zoom) on Tuesdays, 11-1
- From now on, “live” lecture only on Tuesdays (slides & recordings will be available)
- Questions, concerns....virtual hugs? Please reach out.

Trust & Risk Communication

Let's pretend we're all headed to the Union to eat lunch...



Trust & Risk Communication

Whom (or what) do you trust to ensure that the food you eat is safe?



Why do you trust them? What makes them trustworthy?
What might make your opinion change?

Trust & Risk Communication

- Farmers
- United States Department of Agriculture (USDA)
- Food and Drug Administration (FDA)
- Maine Department of Health and Human Services
- University of Maine, Orono campus
- University of Maine system
- Food service employees, student workers
- Occupational Health and Safety Administration (OSHA)
- Marketers/Advertisers
- Lawmakers (state, national)
- **Others??**

Trust & Risk Communication

Who counts as a “**source**” when it comes to risk information?

- State and federal agencies
- Elected officials
- Area “experts” (e.g., scientists)
- Employers
- Private industry
- Neighbors, family, friends
- Media (newspapers, TV, social media, etc.)
- Etc.



****A.K.A. “amplification stations” (SARF)**

The New York Times

Trust & Risk Communication

Source credibility (or “interpersonal trust”):

“the perceived presence or absence of particular traits in the source” (Trumbo & McComas, 2003, p. 344), e.g.:

- Fairness
- Bias
- Believability
- Competence in fulfilling responsibilities
- Respect for people’s privacy
- Watching out for the public’s interest
- Concern about community wellbeing
- Etc...



Trust & Risk Communication

Perceived risk, trust, and democracy (Slovic, 1993)

- Lack of **trust** a critical factor in risk management
- ↓ in confidence and ↑ in risk concern

“If you trust the risk manager, communication is relatively easy. If trust is lacking, no form or process of communication will be satisfactory. Thus, trust is more fundamental to conflict resolution than is risk communication” (p. 677).



Trust & Risk Communication

“Trust is fragile. It is typically created rather slowly, but it can be destroyed in an instant – by a single mishap or mistake. Thus, once trust is lost, it may take a long time to rebuild it to its former state” (p. 677).

Trust & Risk Communication

Asymmetry Principle (Slovic, 1993)

*Trust is more easily lost than regained.
Why?*

1. Negative (trust-destroying) events more visible/noticeable than positive (trust-building) events
2. Negative (trust-destroying) events carry more weight than positive events



Negative events
seen as more
likely to have a
powerful effect
on trust than are
positive events



“An advisory
board of local
citizens and
environmentalists
is established to
monitor the plant
and is given legal
authority to shut
the plant down if
they believe it to
be unsafe”

Fig. 1. Differential impact of trust-increasing and trust-decreasing event.
Note: Only percentages of Category 7 ratings (very powerful impact)
are shown here.

Trust & Risk Communication

Asymmetry Principle (cont'd) (Slovic, 1993)

3. Sources of bad (i.e., trust-destroying) news tend to be viewed as more credible than sources of good news
e.g., “intuitive toxicology”

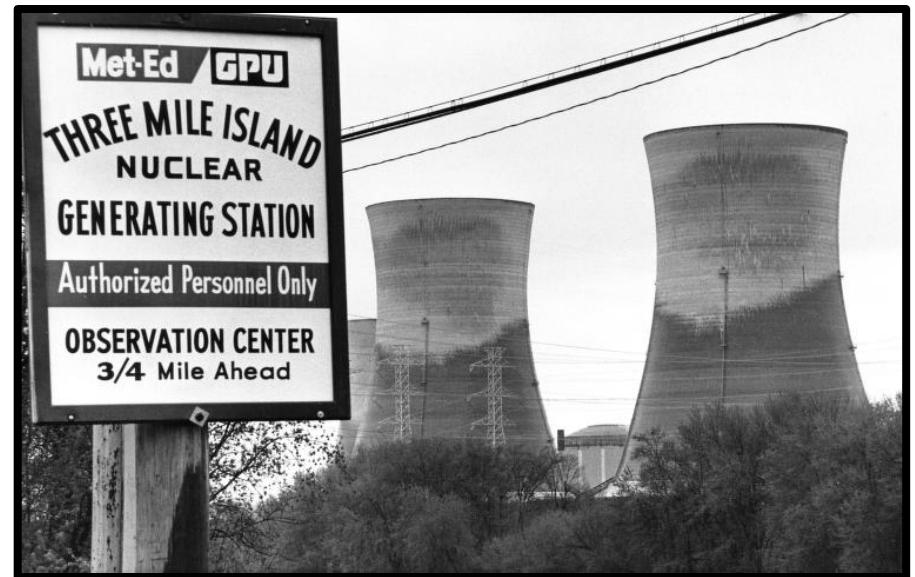


Trust & Risk Communication

Asymmetry Principle (cont'd) (Slovic, 1993)

4. Distrust tends to perpetrate distrust

- We avoid contacts and experiences needed to overcome distrust
- Initial distrust tends to color interpretation of events, reinforcing prior beliefs



Trust & Risk Communication

“The system destroys trust”

“Conflicts and controversies surrounding risk management are not due to public irrationality or ignorance but, instead, can be seen as expected side effects of...**psychological tendencies** interacting with our remarkable form of **participatory democratic government**, and amplified by **certain powerful technological and social changes in our society**” (Slovic, 1993, p. 679).

- Role of the **media** (important for SARF)
- Rise of **powerful interest groups** (recall the vaccine debate)

Trust & Risk Communication

“The system destroys trust”

“A single study demonstrating an association between exposure to chemicals or radiation and some adverse health effect cannot easily be offset by numerous studies failing to find such an association” (Slovic, 1993, p. 680).



Trust & Risk Communication

“The system destroys trust”: Implications

- Need for power sharing, openness, public involvement
- Public participation in risk decision-making paramount (**more on this later!**)
- Recognizing objective risk (and finding technological solution) necessary, *not sufficient* for risk management (recall Fischhoff)

Trust & Risk Communication

Questions, comments, reactions so far?

Social Amplification of Risk

The Social Amplification of Risk (Kasperson et al., 1988)

- Why do some risks or risk events elicit strong public concern while other risks do not? (Recall Slovic)
- How can we explain and **predict** how people will respond to risks?
- How can we integrate both the nature of the risk, and other factors, like social groups, and cultural beliefs?
- A comprehensive framework is needed



Social Amplification of Risk

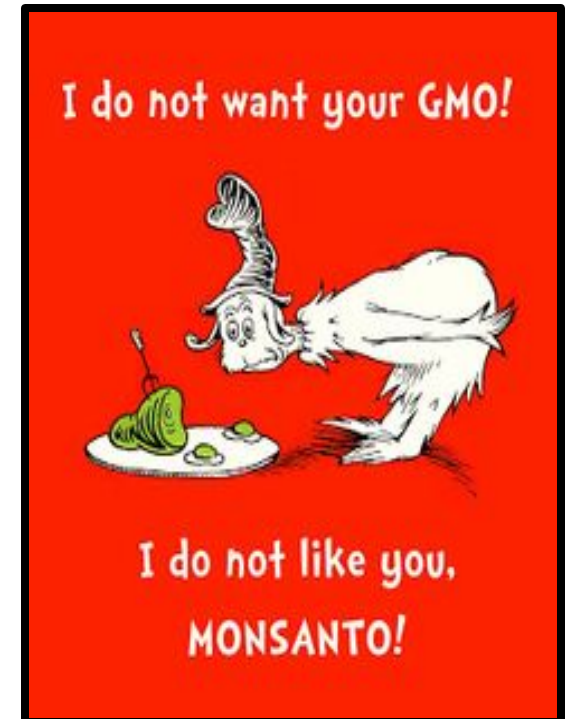
“[H]azards interact with **psychological, social, institutional, and cultural processes** in ways that may amplify or attenuate public responses to the risk or risk event” (Kasperson et al., 1988, p. 177).

- **Risk amplification**
- **Risk attenuation**
- Risk event → Information about risk → Individual or group-level behavioral responses → higher-level economic, social, and political consequences



Social Amplification of Risk

- Takes into consideration the “higher-order impacts” of a risk event
- Improves the predictive power of traditional cost-benefit risk analysis
- Provides a theoretical base for a larger investigation and analysis of risk management in modern societies
- “Fledgling conceptual framework” (p. 180)



Social Amplification of Risk

Uses the **source-receiver** model of communication:



"An information source sends out a cluster of signals (which form a message) to a transmitter, or directly to the receiver. The signals are decoded by the transmitter or receiver so that the message can be understood. Each transmitter alters the original message **by intensifying or attenuating some incoming signals, adding or deleting others, and sending a new cluster of signals** on to the next transmitter or the final receiver where the next stage of decoding occurs" (Kasperson et al., 1988, p. 180)

Social Amplification of Risk

Key steps in risk amplification:

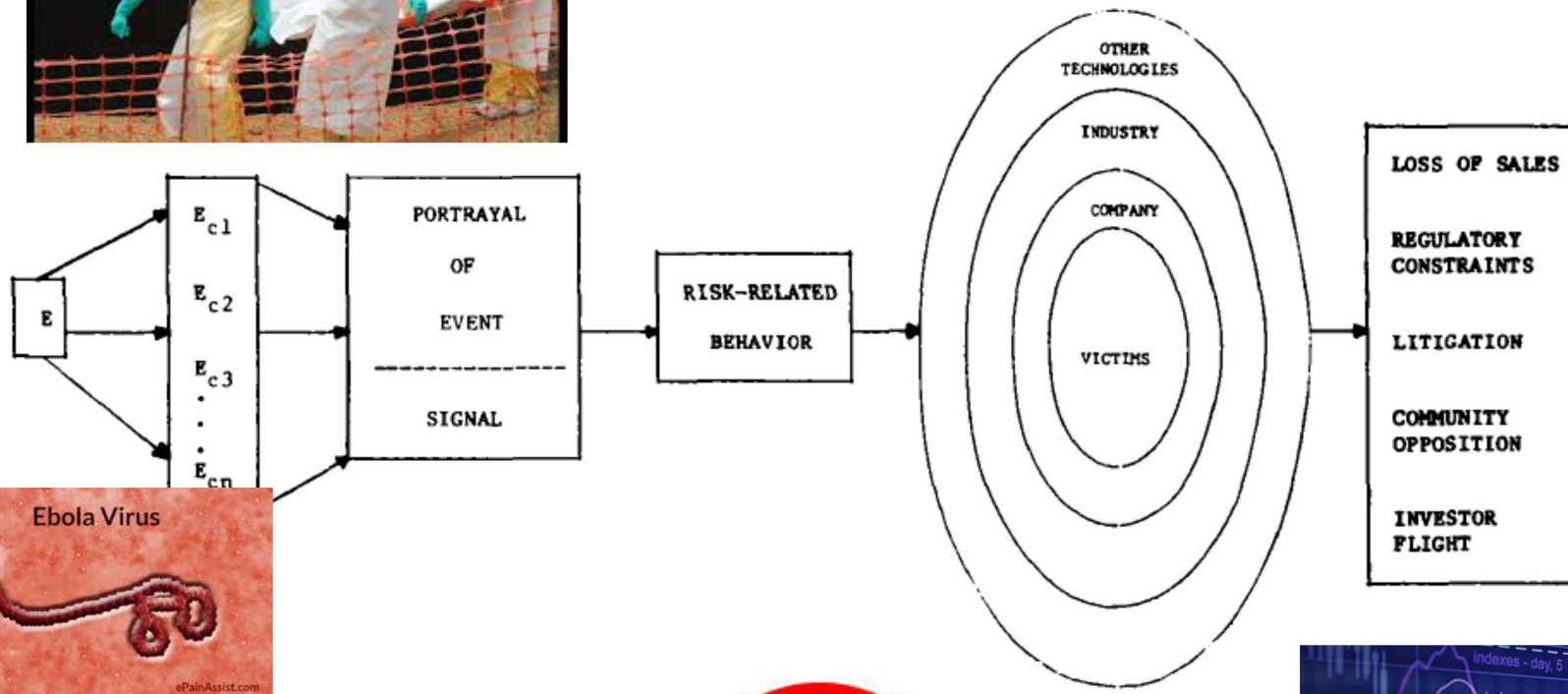
- Filtering signals
- Decoding signals
- Processing risk information
- Attaching social values to information
- Interacting with one's cultural and peer groups to interpret the information
- Formulating behavioral intentions vis-à-vis the risk
- Engaging in individual or group behavior to ignore, tolerate, or change the risk

Social amplification of risk

Questions, comments, reactions so far?



Kasperson et al.



RISK
EVENT

EVENT
CHARACTERISTICS

INFORMATION
FLOW

EBOLA

LEAD OF IMPACT

potential impacts of

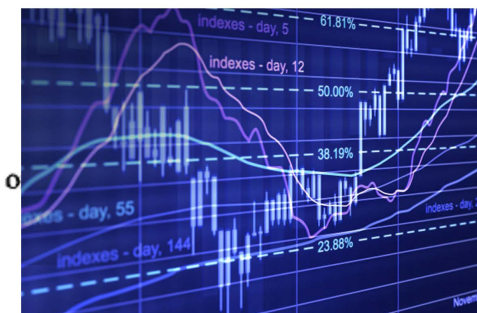


Fig. 1. Highly simplified representation

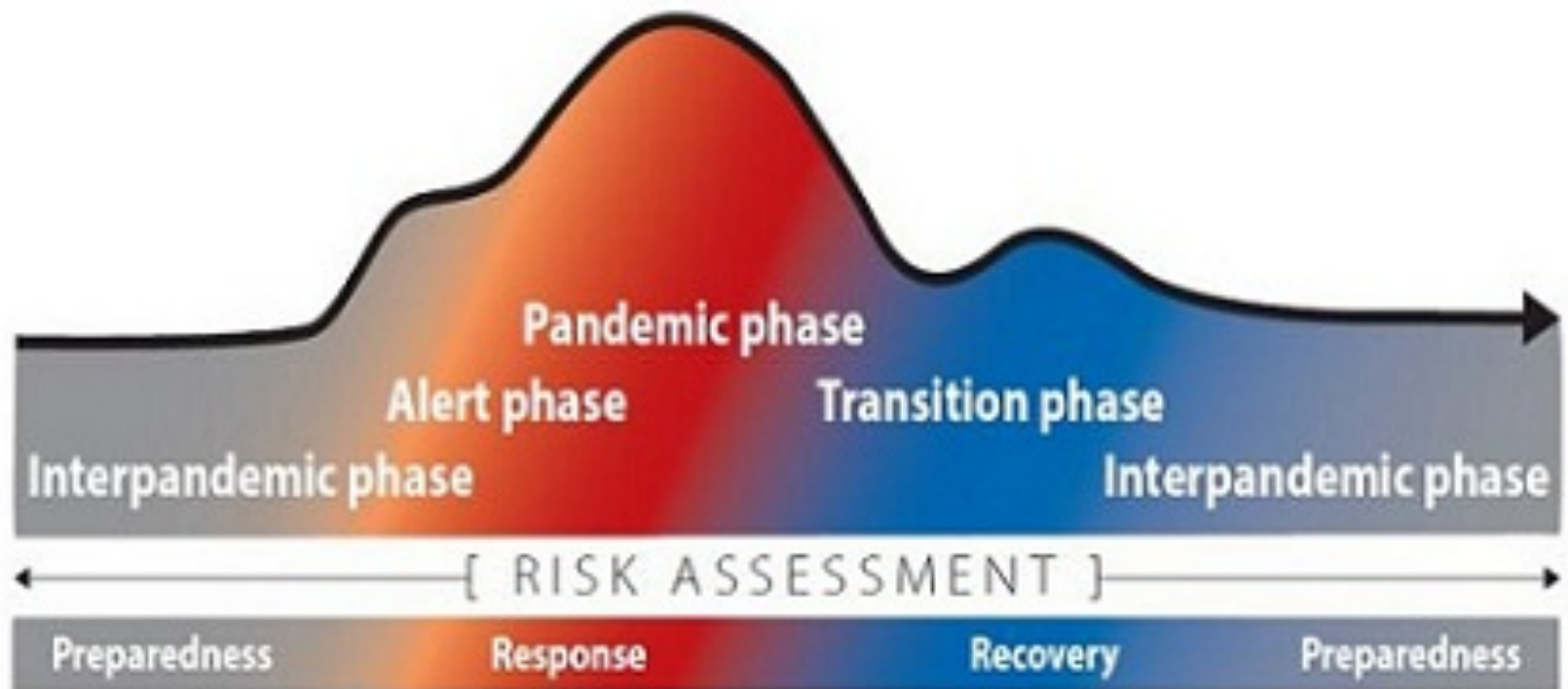


Social Amplification of Risk

“Social stations of amplification” process information

- Information may amplify or attenuate a given risk by intensifying or weakening signals that individuals or groups receive:
 - ✓ **Quantity of information** (i.e., availability heuristic)
 - ✓ **Controversy about information** (e.g., uncertainty)
 - ✓ **Dramatization of the information** (e.g., sensationalism)
 - ✓ **Certain communication channels** (e.g., news media vs. interpersonal networks)
 - ✓ **Concepts or terms** (e.g., symbolic connotations)

Risk
Event



Risk
Event

Sources of
Amplification

- Personal Experience
- Direct Communication
- Indirect Communication

Channels of
Amplification

- Individual senses
- Informal Social networks
- Professional information brokers

Social Stations of
Amplification

- Opinion leaders
- Cultural and social groups
- Government agencies
- Information office (PR)
- News Media

Individual
Amplification
Stations

- Attention filter
- Decoding
- Intuitive heuristics
- Evaluation
- Reference to social context

Group and
Individual
Responses

- Attitude/ Attitude change
- Political and social action
- Behavioral and organizational response
- Social protest and disorder

Ripple Effects

- Affected persons
- Local community
- Company
- Professional groups
- Industry
- Stakeholder groups
- Other technologies
- Societal issues

Impacts

- Loss of business
- Financial losses
- Regulatory constraints
- Organizational changes
- Litigation
- Increase or decrease in physical risk
- Sabotage Terrorism
- Loss of confidence in institution



Sources of Amplification

Channels of Amplification

Social Stations of Amplification

Individual Amplification Stations

Group and Individual Responses

Ripple Effects

- Affected persons

Impacts

- Loss of business
- Financial losses

♥ Rob Glover and 2 others liked



Dr. Jacquelyn Gill ✓ @JacquelynGill · 1h

Many of us are shutting down labs that have cases of PPE in them. I'm contacting my university administration today to ask if we can make those available to local hospitals.

💬 19

↻ 184

♥ 763



Risk
Event

Novel Coronavirus Community Updates

Impacts

- Loss of business
- Financial losses
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Risk Event

Sources of Amplification

- Personal Experience
- Direct Communication
- Indirect Communication



ipple Effects

Affected persons
Local community
Company
Professional groups
Industry
Stakeholder groups
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Societal issues

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Risk
Event



Impacts

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Risk
Event

Sources of
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- Direct Communication
- Indirect Communication



and disorder

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Trust & Risk Communication

Questions, comments, reactions so far?

The case: Silicone Breast Implants

Why does trust/credibility matter?

- When individuals distrust the source, they distrust the information
- They also often perceive the risks as more severe

The case: Silicone Breast Implants

- **1960s:** First silicone breast implants developed by plastic surgeons
- **1976:** FDA enacts Medical Devices Amendment to the Federal Food, Drug, and Cosmetic Act, giving it authority to approve safety of new medical devices. Silicone breast implants “grandfathered.”
- **1980s:** Ralph Nader’s Public Citizen Health Research Group suggests silicone breast implants cause cancer.
- **1984:** *Stern vs. Dow Corning*. Maria Stern wins case, suggesting that autoimmune disease is caused by ruptured breast implants (\$211,000)
- **December 1990:** *Face to Face with Connie Chung*: dangers of silicone breast implants; Congressional hearing on safety

The case: Silicone Breast Implants

- **1992:** FDA Commissioner calls for a voluntary moratorium on the distribution or implantation of silicone breast implants (they had not been “proven safe”)
- **June 1994:** Epidemiologic study published in *New England Journal of Medicine* – no increased risk of connective-tissue disease and other disorders
- **1995:** Dow Corning files for bankruptcy
- **1998:** Class action lawsuit finalized (\$3.2 billion)
- **1999 – present:** Several large, independent reviews of the scientific literature suggest no health impacts
- **2006:** FDA approves sale of certain silicone breast implants

The case: Silicone Breast Implants

Attributes of the risk

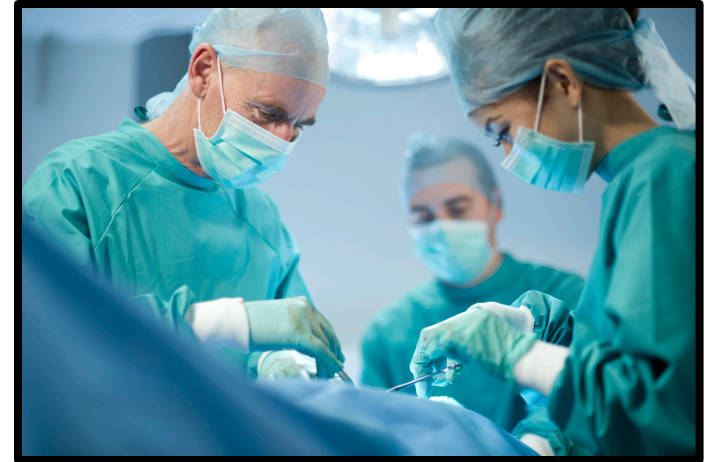
- Voluntary/Involuntary?
- Controllable/Uncontrollable?
- Known/unknown?
- Dreaded?
- Low probability/high impact event



The Case: Silicone Breast Implants

Heuristics and Biases

- **Availability**
 - Striking anecdotes
 - Imagery of affected women
- **Overestimation of conjunctive events**
 - % of women with breast implants
 - % of women with connective tissue/autoimmune disorders



****Recall:** 1% of American women have implants; 1% of these women report symptoms.

The case: Silicone Breast Implants

Trust/Credibility

- **Sources of information:** medical professionals, industry representatives, medical journals, news media, the process of science...
- **Negative events** (e.g., sick women) more visible/noticeable than positive events (e.g., women without problems)
- Trusting science vs. trusting “**lived experience**” (i.e., “we are the evidence”)



The case: Silicone Breast Implants

Trust/Credibility (cont'd)

- Trusting industry to watch out for the public interest?
 - Evidence that Dow had information about leakage potential
 - Evidence that Dow attempted to influence expert witnesses, juries by emphasizing corporate citizenship (e.g., TV ads)



The case: Silicone Breast Implants

Social amplification of risk

- **Media coverage**
 - Focus on victims, negative cases, anecdotal
 - Assumption of industry guilt

“Newspapers increasingly reported on implant-related risk, providing details to the public about alleged manufacturer cover-ups and anecdotes from women who claimed they were harmed by the devices. A few ongoing court cases also received close news coverage” (Doyle, p. 258).



The case: Silicone Breast Implants

Lester Holt

Jenny Jones Show

Breast Implant Settlement Coverage



- Examples of journalistic norms? (e.g., balance)
- Who is interviewed? How is expertise demonstrated?
- Would this segment lead to amplified or attenuated risk?

The case: Silicone Breast Implants

“The system destroys trust”

The New York Times
Business SUNDAY, FEBRUARY 16, 1992

Dow Corning's Moral Evasions

By STEVEN FINK



THE Dow Corning Corporation revealed itself last week as a company with a serious moral compass.

In heavily redacted sections showing that for two decades it had known silicone gel was toxic to gel breast implants and women's bodies. Accompanied by a shaming of top management and the long-overdue steps to cooperate fully with Federal product safety investigations, these new columns and the new reader are promising. But putting much on the bench to be called on only if desperate crises are a crisis management error of potentially lethal proportions.

By becoming forthright only after substantial, denial and disavowal failed, the company demonstrates that honesty had been relegated to a backup position. In admitting that it has not been completely honest for years, the company now faces the commandment known as the "har's ought not": If an admission has to be made if he is not telling the truth, do you believe him if he says "yes" — or "no"?

The public's perception of corporate wrongdoing — is both a legal and a moral issue — has caught up with Dow Corning. But although the company has brought in a seasoned crisis manager, Keith McArthur, and isolated the crisis from other operations, these actions should have been initiated long ago. Companies have moved beyond crisis into calamity and the company's handling of it has shifted from crisis management to disaster control. This is always dangerous, and it could be even more so for Dow Corning because it has not recognized that crisis management is not management by crisis.

The company's statements last week that it may pay for implant removal for any woman who wants it does not seem to offer a timely and helpful signal to women. If Dow Corning is willing to pay the bill, how safe can the device be? The company justified not releasing the women earlier for fear of panicking women. But what does it think it is doing now? Its behavior looks like the most blatant display of insensitivity to women since the Consumer Theater Incident.

And that's unacceptable. The company had 26 years to prepare for this. The women were crisis prisoners — warning signs — that the company continuously buried for two decades. It did so rather than fix the problems. Ignoring women were the downfall of Three Mile Island, Union Carbide and Martin Marietta. These crises provided a lesson. Companies must identify and respond to early warning signs — proactive crisis management and the best strategy — instead of reacting in desperation or denial.

When the women were women years ago, the company should have treated the customer right — that it is only now contemplating and a data base for doctors. It also should have created a crisis management plan guided by a code of corporate ethics.

FROM the beginning, Dow Corning relied too much on heavy-handed lawyering. Lawyers in product liability cases often take the view that everything revolves around the law and its loopholes. What becomes obscured is the ultimate crisis management objective: to have a company left to manage after — or if — the crisis passes.

Early on, the company had sight of the need for crisis management team: In the pocket battle between perception and reality, perception usually wins. Creating the right perception at the beginning is vital. Crisis management is a well-trodden path with clear trail markings. Dow Corning should have been able to follow it. ■

The implant maker told the truth only after deception failed.

Steven Fink, president of the Leukemia Research Foundation, was the author of the book "The Crisis Management Team" in 1988.

The case: Silicone Breast Implants

Social amplification of risk

- **Secondary impacts**
 - Dow Corning bankruptcy
 - Mass litigation
 - Effect of tort law on conduct of research studies
 - Availability of other medical supplies containing silicone?
 - Decreased trust in medical professionals?
 - Decreased trust in science, more generally?

DOW CORNING