

Consumer Response to Process Labels on Food: The Good, The Bad, and the Ugly

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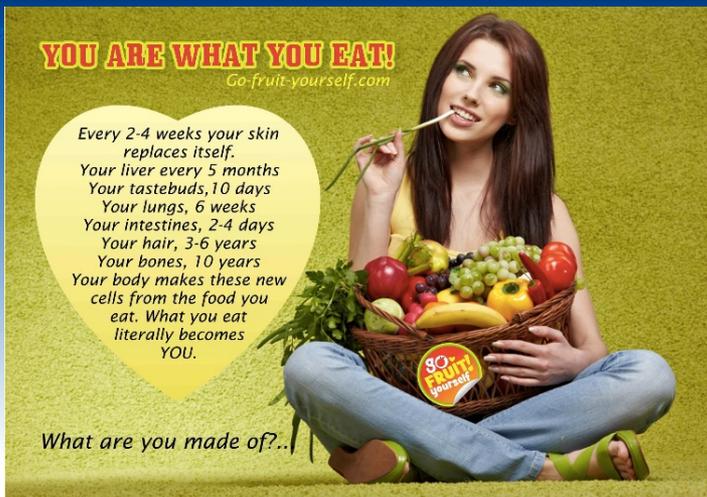
Thank you

- Jonathan McFadden
- Catherine Greene

Based on *CAST Issue Paper on Process Labeling* by Messer, Bligh, Costanigro, Kaiser (2015) and *AEPP paper* by Messer, Costanigro, and Kaiser (2017).

See also “Beyond Nutrition and Organic Labels — 30 Years of Experience With Intervening in Food Labels” (USDA-ERS report ERR-239, 2017)





YOU
ARE
WHAT
YOU
EAT



“You are what you eat” speaks to the intimate connection between individuals’ food choices and their health—and even their personal identity.

Yet most consumers rarely grow their own food, which means that what people “are” is generally beyond their control.

Asymmetric information



- Consumers cannot directly observe the production processes that created the food they eat.
- Consumers can find it difficult to align food choices with their preferences.
- This situation is ripe for mistrust due to asymmetric information.
- Consumers want more information about their food.
 - Marketers are responding to this consumer demand.
- Consumers associate process labels to differences in product quality, but also to other ethical, social, and environmental consequences of food production.

Food companies are using labels to communicate specific production processes



Note that process labels have a long history:



Kosher



Examples

SINGLE PRACTICE	SET OF PRACTICES
✓ Antibiotic Free	✓ American Humane Certified
✓ Cage-free Eggs	✓ Animal Welfare Approved
✓ Dolphin-safe Tuna	✓ Bird Friendly
✓ “Contains/Free of” Genetically Engineered Product (GMO)	✓ Certified Humane
✓ Pasture-raised Eggs	✓ Fair Trade
✓ Radura	✓ Free Range
✓ rbST-free Milk	✓ Halal
✓ Shade-grown Coffee	✓ Humanely Raised
✓ Vine-ripened Tomatoes	✓ Kosher
	✓ Organic
	✓ Rainforest Alliance Certified
	✓ Salmon Safe
	✓ Sustainably Produced

Note this is different than about labeling of ingredients, calories, or nutritional content.



- Inherent in this legislation is the tension between principles of “consumer right to know” and “consumer need to know,” as well as the pragmatic, business-oriented aspects of putting such labeling initiatives into practice.
- At least five US states enacted legislation or attempted to regulate claims on food products that are free of rbST, including Indiana, Kansas, Missouri, Ohio, and Pennsylvania.
- At least 26 states proposed labeling legislation for foods containing genetically modified (GM) organisms.
- For instance, in 2014 Vermont required manufacturers to label food if it contained GMOs.
 - Law was in effect for less than a month before new mandatory GMO labeling law was signed



Process Labels: The Good





Benefits of Labels

Under appropriate third-party or governmental oversight, process labels can accomplish the following:

1. Bridge the informational gap between producers and consumers.
2. Create value for both consumers and producers.
3. Help correct for negative externalities associated with some food production processes (environmental, or animal welfare)
4. Promote justice (i.e., fair trade)
5. Help remove ingredients from the food we eat that have been *scientifically* proven to be harmful.

Process Labels: The Bad





- A fundamental problem with process labels is that they are subject to consumers' interpretation (or misinterpretation).

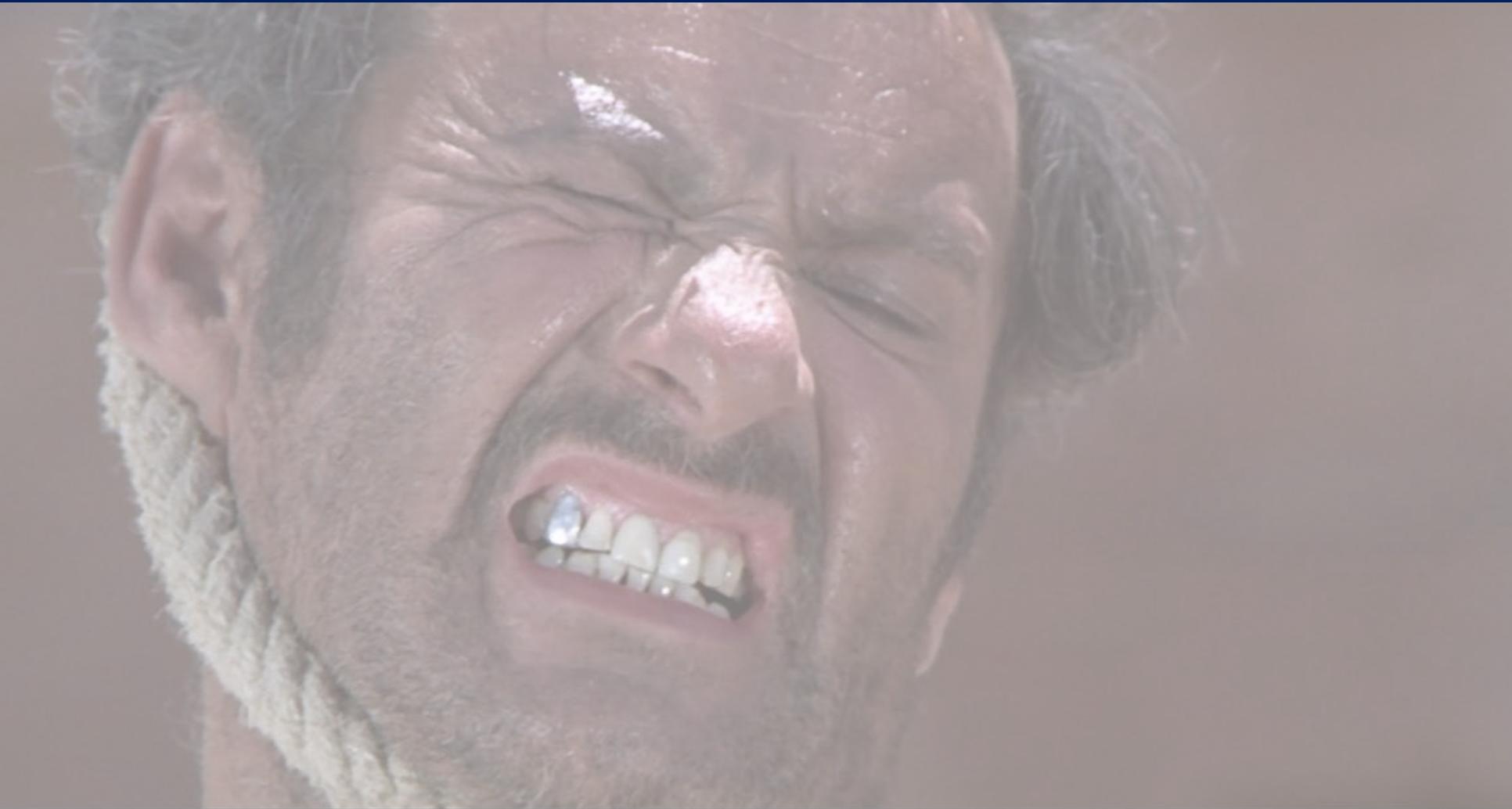
- Consumers often overstate the importance of labels that are placed on the front of the packaging.
- Costanigro et al. found that front of package labels, such as the organic label, can induce an “upward bias in the consumer’s assessment of nutritional quality”.
- Lee and colleagues’ (2013) study found that consumers associated organic food with lower calories, less fat, and better nutritional evaluations.
 - However, organic certification is focused on the production process and lack of “pesticides, synthetic fertilizers, sewage sludge, genetically modified organisms, or ionizing radiation.”



- Consider the “low food miles” label
 - “Low food miles” tomatoes could be grown in energy-intensive greenhouses.
 - Consumers may end up paying a premium to obtain the opposite environmental impact they want.
- Schuldt, Muller, and Schwarz (2012) found that consumers misinterpreted the “fair trade” label
 - Attributed the label as meaning, in part, that the food had lower calories.
- A 2014 Consumer Reports study found that 2/3 of consumers believe that the “natural” label meant that the food had no artificial ingredients, pesticides, or GMOs.



Process Labels: the Ugly



- Neophobia, the aversion to new things, is engrained in human instincts.
- Thus process labels communicating the use of a specific technology—generally new and unknown to consumers—often will induce an instinctive, negative reaction.
- Media tends to focus on negative issues. And consumers tend to weight bad news more heavily than good news.

- Consider irradiation of food.
- There have been many scientific studies on the impact of irradiation of food on human health.
- The general scientific consensus is that there are no significant negative health effects.
- The FDA and USDA have approved the use ionizing radiation for
 - Spices and dried vegetable seasoning (1983),
 - Pork (1985),
 - Fresh fruit and vegetables (1986),
 - Poultry meat (1990),
 - Ground beef (1997),
 - Shell egg (2000),
 - Sprouting seed (2000), and
 - Mollusks (2005).



Radura

- Costanigro and Lusk (2014) show that a process label communicating that a fruit was “ethylene ripened” induced a negative response on par with the aversion manifested toward GE products.
- However, ethylene is a natural-occurring hormone and it’s equivalent to setting a banana in a fruit bowl to promote ripening.



- Stigmatization is particularly problematic when there is no scientific evidence that food produced in this manner causes harm
 - or even that it is compositionally any different.
- Thus, labeling the benefits for a new product can cast the conventionally produced product in a negative light.

**SCARED OF ADDED
HORMONES?**

MOE'S
SERVES ONLY
ALL-NATURAL
CHICKEN.



- Consumers encounter a wide array of process labels. The number and type of labels is growing, but the idea of process labels has a long history.
- Process labels can help solve the problem of asymmetric information in the food system between producers and consumers.
- However, these process labels are subject to misinterpretation by consumers, which can lead to misallocation of consumer resources.
- Process labels can be also used by marketers to stigmatize competition products through inducing fear. This can negatively effect foods that have not been shown to be harmful to human health.
- Recent research (such as Li and Messer, JARE 2019) suggests that next-generation process labels, such as QR labels and smart phones, may help solve asymmetric information problem without inducing as much fear on otherwise safe foods.

Thank you

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