

# The Psychology of Food Choices

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# How Do We Decide What Foods to Eat?





Food is Different

# You Are What you Eat

- We literally (and figuratively) internalize the perceived risks and benefits related to food and drink.







## We Reinforce This Idea



# We Use Food to Make Ourselves Feel Better



- Physically







# We Use Food to Make Ourselves Feel Better

- Emotionally



# You Are What you Eat



- Because we internalize them, potential food hazards are often seen as objects of *disgust*.

# One Man's Meat

- Yet, what's considered a delicacy in one culture can be an object of disgust in another.





# Emerging Food Trends Depend on Evolving Social Norms



# What Others Eat/Endorse Influences What We Are Willing to Try





# Food Carries Emotional Meaning

- Sharing food with others is
  - Symbolically, psychologically, and emotionally linked with love, nurturing and intimacy.
  - Considered crucial to creating and maintaining bonds between people.



- The adulteration of food and drink is seen as a violation of the trust and bonds between people.



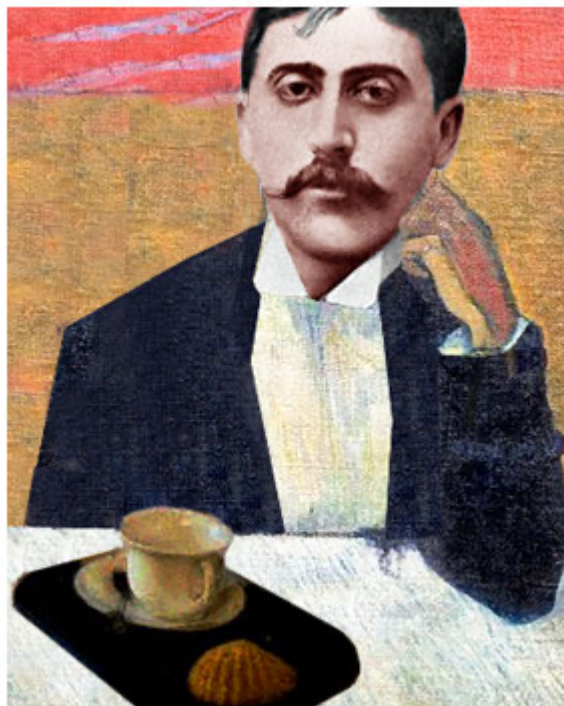
# Food Carries Symbolic Meaning

- Some foods have more than nutritional value, they have symbolic value



# Food Can Trigger Memories

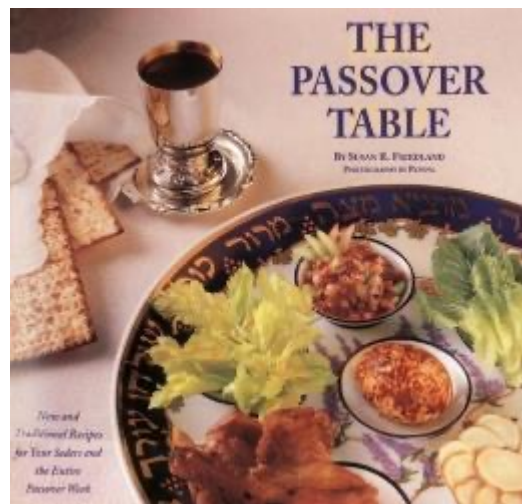
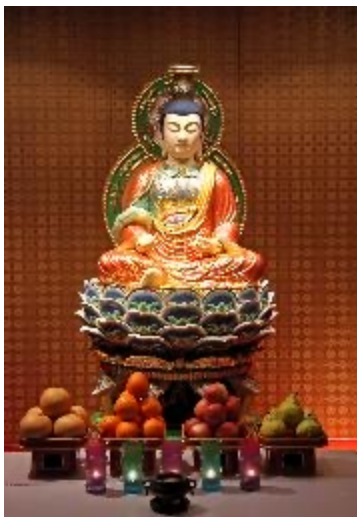
- Proust's Madeleine.



“And suddenly the memory revealed itself: The taste was that of the little piece of madeleine which on Sunday mornings at Combray . . . my aunt Leonie used to give me, dipping it first in her own cup of tea or tisane.”

# Food Carries Cultural Meaning

- Food carries distinct religious, symbolic, and cultural meanings that sets it apart.
  - Feasting, fasting, and the ritual preparation and consumption of certain foods
  - Taboos or restrictions regarding eating or touching of others
  - Each play crucial roles in religious and cultural practices and identities.



# Food Choices Signify Identity

- People often use their food choices to represent and communicate:
  - Who they are as individuals



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  - Their political or ideological beliefs





# Food Choices Signify Identity

- People often use their food choices to represent and communicate:
  - Who they are as individuals
  - Their political or ideological beliefs
  - Their roles and status in society



# Food Choices Can Signify Group Solidarity

- People often use their food (and drink) choices demonstrate that they are part of the group



# Even if it means we Sometimes Consume Things We Don't Like

- From the original label:

“Most first-time drinkers of Jeppsons Malört reject our alcohol. Its strong, pungent taste is not for everyone. Our schnapps is robust and relentless (even brutal) on the palate ... we have found that only 1 in 49 men will drink Jeppsons Malört after the first “shock glass.”

“Malört” is the Swedish word for wormwood, the main ingredient in this terrible spirit. Wormwood is a notoriously bitter herb known for its ability to kill stomach worms and other parasites. Swedes began infusing it with alcohol and using it as a medicine for digestive problems in the 15th century . . .”

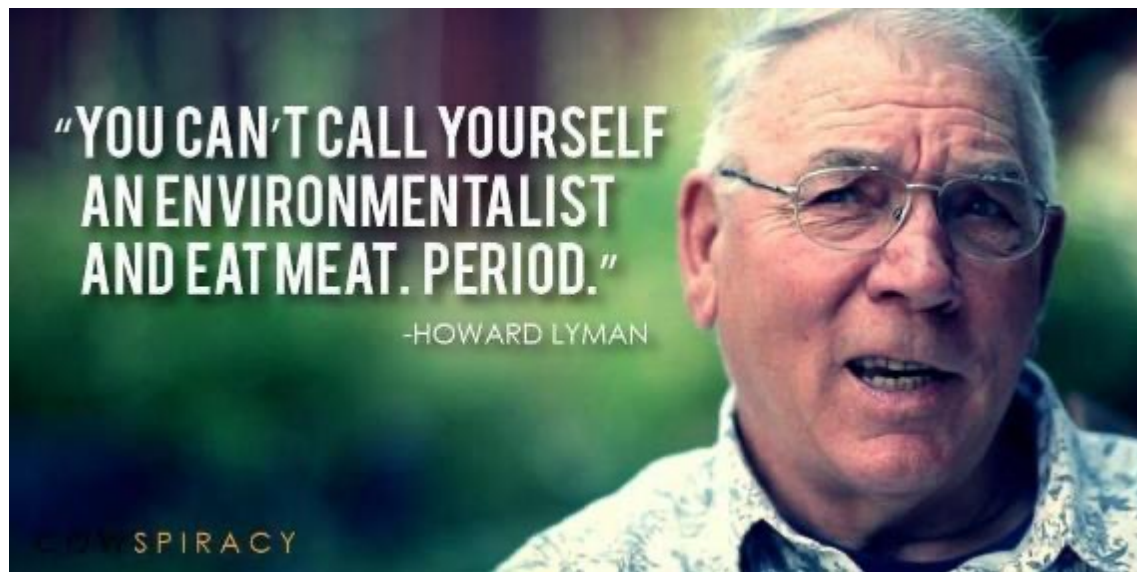


<https://absolutegeneralnews.com/jeppsons-malort-most-likely-the-worlds-worst-tasting-liquor/>



# Identity Politics

- You can't call yourself a . . .



## Helpful Friends and Family





Our Food Choices are Driven by both  
Cognition and Affect

# Cognition and Affect (Thinking and Feeling)

- Many psychologists (and especially economists) believe that affect (emotion) is the byproduct of cognition.
  - People evaluate the information they are given, which leads to an overall affective reaction



# Affect Can Come First

- Affect can also drive future cognition.





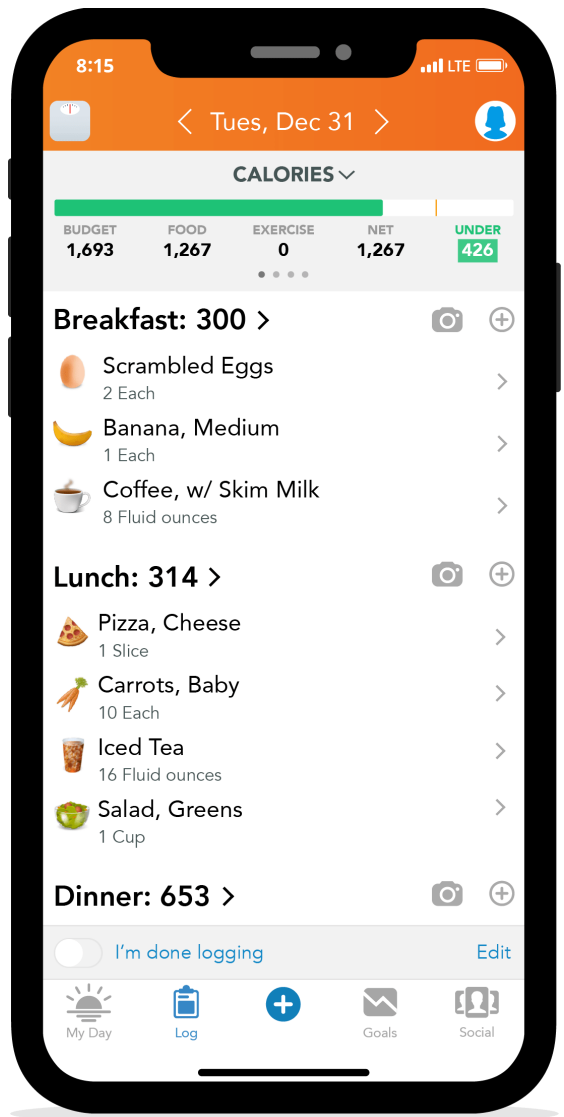
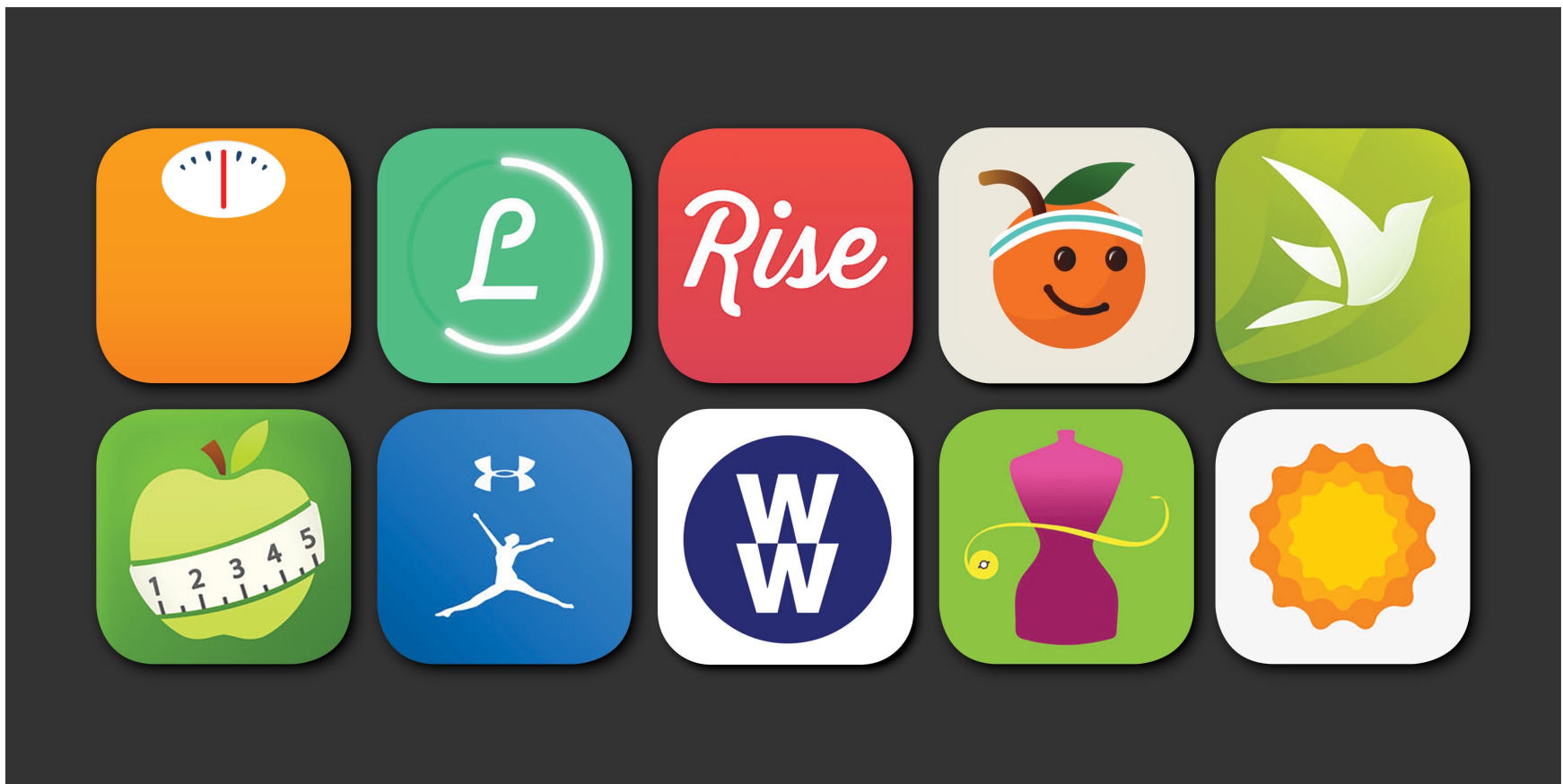
Some Food Choices are Driven by a Cognitive  
Focus on Nutrition







# Nutrition Apps



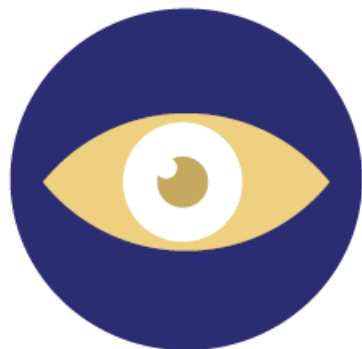




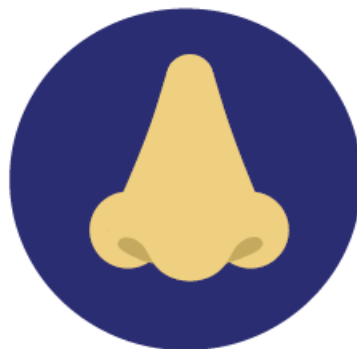
Most Food Choices are Driven by Hedonics

# Hedonics

- Hedonics are experiences of pleasure and displeasure



*Visual aspect*



*Olfaction*



*Taste*



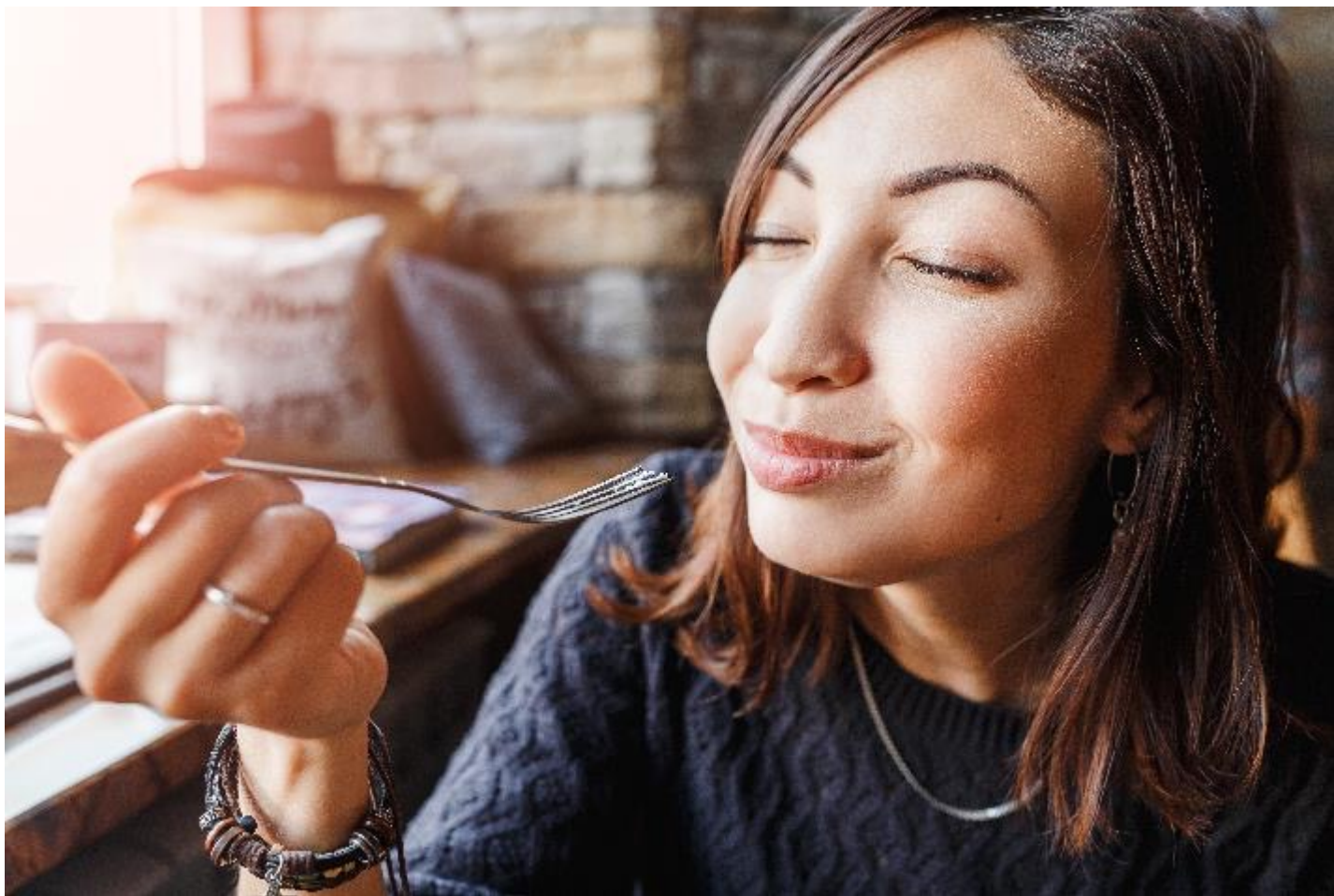
*Texture*



# Our Past Hedonic Experiences Guide Our Future Expectations



# We Anticipate Pleasure by Observing Others





# We Anticipate What Will Not be Pleasurable by Observing Others







# We Anticipate What Will Not be Pleasurable by Observing Others



# We Don't Always Know What We Like

- Malcolm Gladwell worked for Nescafé
- When asked what kind of coffee they like, most Americans will say: "a dark, rich, hearty roast".
- But actually, only 25-27% want that.
  - Most prefer weak, milky coffee.
- “Judgement is clouded by aspiration, peer pressure and marketing messages”





## The Problem of Invisibility



# Most of the Foodborne Contaminants of Concern Are Invisible

## Bacteria



E coli

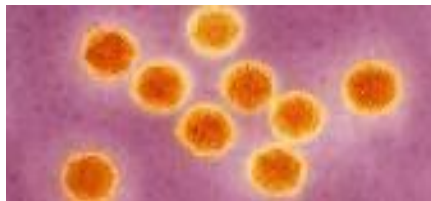


Salmonella

## Viruses



Norovirus

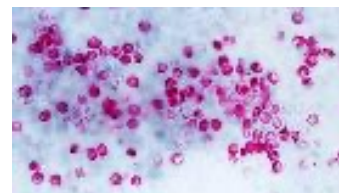


Hepatitis A

## Parasites

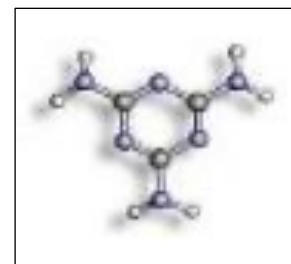


*Trichinella spiralis*

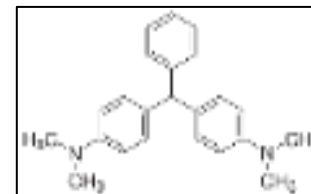


*Cryptosporidium parvum*

## Toxic Chemicals



Melamine

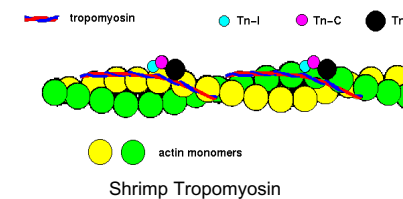


Malachite Green

## Allergens



Peanut Ara h 1



# Most of the Foodborne Benefits We Desire Are Invisible

Micronutrients



Macronutrients



Taste



Sustainability,  
Ethics & Values



*Vitamins/Minerals*



Calories



Culture, Tradition,  
Joy, Nostalgia



# Implications of Invisibility

- We need to rely on other trusted information to make the invisible visible.
  - Ingredient Labels
  - Health Claims
  - Date Coding
  - Proxy Visual Information
  - Taste & Smell
  - Heuristics/Rules



# Problem of Invisibility for Food Safety

- We rely on other visual and olfactory cues to know what is safe and what is not.
  - Many believe that if it looks “clean” there are no bacteria.
  - Spoilage bacteria (responsible for bad tastes and odors) are not a reliable indicator of Pathogenic Bacteria (responsible for foodborne illness)
    - The “sniff-test” is inadequate.
- Without those cues, it is easy for people to either ignore or to amplify the real risks.





We Try to Maintain the Illusion of  
Control Through a Variety of Means





# We Depend on Proxies to Communicate “Credence Attributes”



- Brand
- Familiarity
- Visual Cues



# Color as an Attribute

- People use color to identify certain foods



## Color as an Attribute

- People use color to identify the ripeness of foods





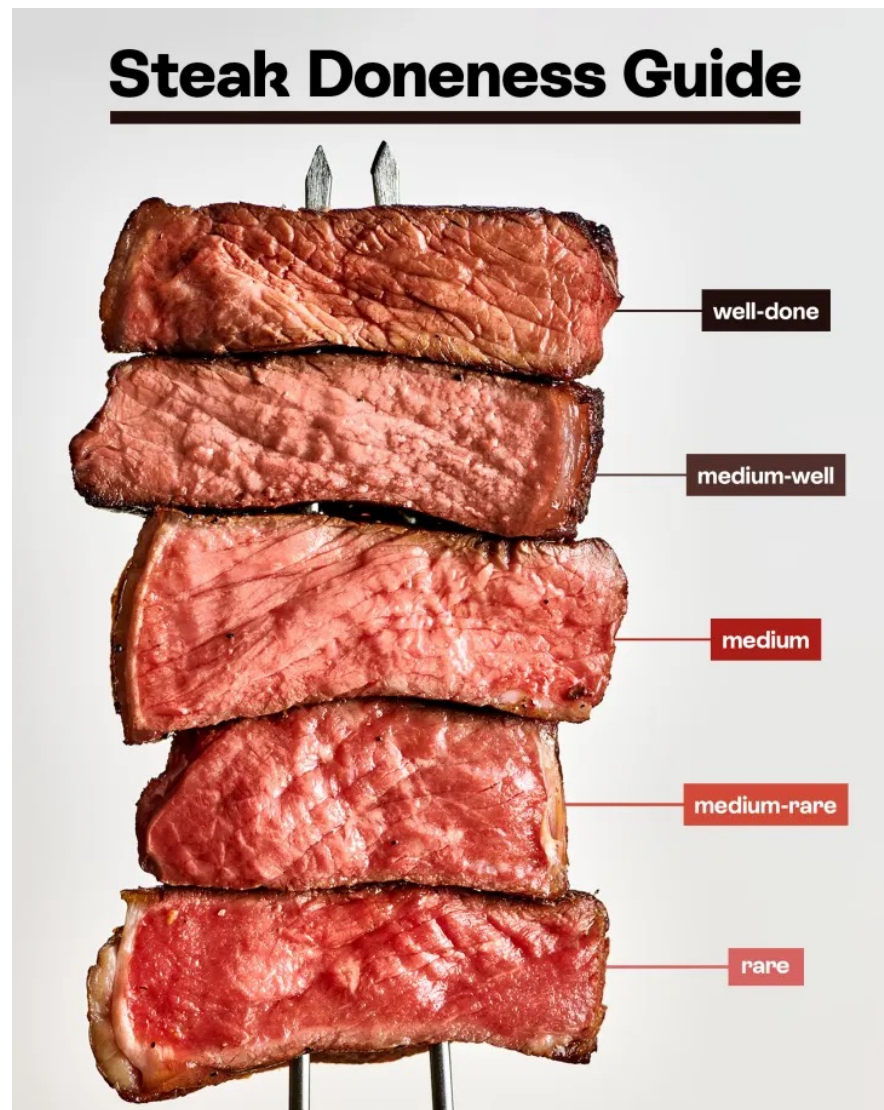
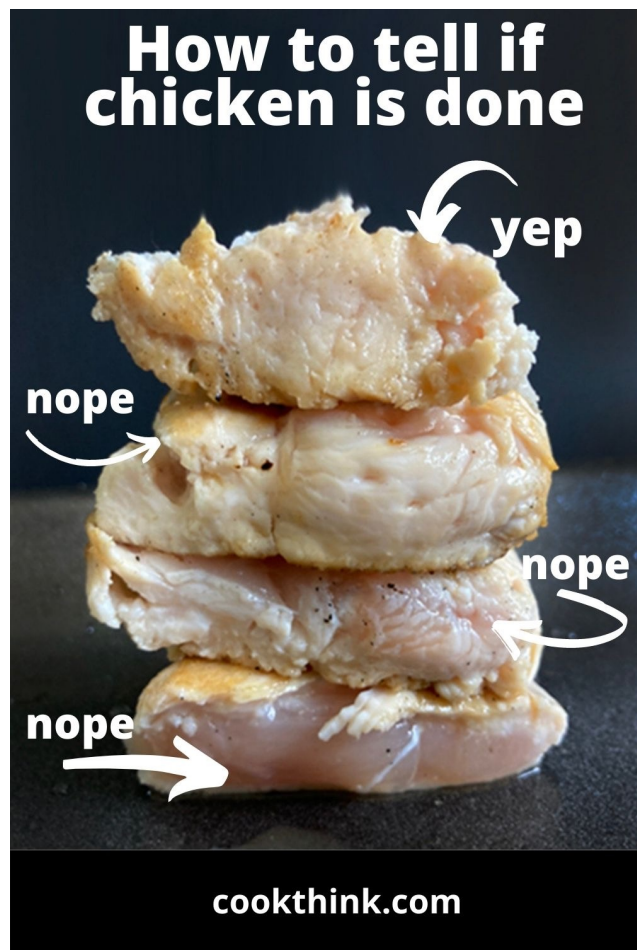
## Color as an Attribute

- People use color to identify the quality/safety of foods



## Color as an Attribute

- People use color to identify how cooked foods are





## Color as an Attribute

- Color of food is used to anticipate the taste of foods



## Color as an Attribute

- Color/flavor associations become conditioned





## Color as an Attribute

- Colors incongruent with pre-conditioned expectations can be problematic



## Other Proxies



- “Homemade” vs. Commercial
- “Handmade” vs. by Machine

# Other Proxies – Choosing Wine

- Price
- Country/Region of Origin
- Color of wine
- Bottle Artwork

<i>RED WINES</i> May 29, 2015		
<i>PINOT NOIR &amp; GAMAY</i>	<i>ITALY</i>	<i>ZINFANDEL</i>
710–Aberrant Cellars “Confero” Willamette Valley 2012..... 60.	966–Amarone della Valpolicella Brigaldara 2009 ..... 97.	963–Zinfandel, Elyse Napa 2010..... 65.
736–Arnot-Roberts “Legan Vineyard” Santa Cruz Mountains 2012..... 97.	747–Barbaresco Riserva “Rio Sordo” Produttori del Barbaresco 2007 ..... 110.	915–Zinfandel Blend, The Prisoner Napa 2013 ..... 77.
702–Belle Glos, “Dairyman Vineyard” Russian River 2013 ..... 69.	912–Barbaresco, Gaja 1999 ..... 315.	954–Zinfandel, Manifesto! Lodi 2013 ..... 36.
709–Bergstrom “Gregory Ranch Vineyard” Yamhill-Carlton 2012..... 110.	950–Barbaresco Riserva, Dante Rivetti “Bricco di Neive” 2006..... 120.	962–Zinfandel Turley “Old Vines” California 2012 ..... 80.
712–Ceritas “Coastalina” Sonoma Coast 2012..... 81.	983–Barbera d’Alba “Granera Alta” Cascina Chicco 2013 ..... 41.	<i>RHONE VALLEY</i>
707–County Line, Sonoma Coast 2013..... 50.	975–Barolo, Conterno Fantino “Sori Ginestra” 2001 ..... 205.	826–Châteauneuf-du-Pape “La Reine de Bois” Domaine de la Mordorée 2004..... 235.
705–Domaine Serene “Yamhill Cuvee” Willamette Valley 2011..... 90.	906–Barolo, Bartolo Mascarello 2004 .... 159.	961–Châteauneuf-du-Pape, Domaine Giraud “Premices” 2011 .... 74.
729–Evening Land Willamette Valley 2012 55.	987–Barolo Piuusso “Mariandino” 2007, 125.	803–Châteauneuf-du-Pape, Paul Antard “Cuvée La Cote Ronde” 2010 ..... 115.
704–Evesham Wood “Le Puits Sec” Eola-Amity 2012 ..... 77.	904–Brunello di Montalcino, Donna Olga 2001 ..... 139.	615–Cormas, Auguste Clape 2007 ..... 185.
725–Eyrie Vineyards Willamette Valley 2012..... 72.	957–Brunello di Montalcino Caparzo 2009 85.	953–Cote Rotie, Patrick Jasmin 2006 ..... 89.
727–Failla “Occidental Ridge Vineyard” Sonoma Coast 2012..... 115.	977–Brunello di Montalcino, Valdicava 2001 ..... 235.	818–Cote Rotie, Rene Rostaing “La Landonne” 2006 ..... 285.
743–Far Niente “En Route” Russian River 2013 ..... 80.	976–Chianti Rufina Riserva “Montesodi” Castello di Nipozzano 2010..... 90.	817–Cotes du Rhone, Mon Coeur 2013 .... 44.
	911–Etna Rosso “Guardiola” Tenuta Delle Terre Nere 2012 ..... 80.	814–Crozes-Hermitage Ferraton Pere&Fils “La Matiniere” 2012 ..... 47.
	979–Flaccianello Fontodi, Tuscany 2004, 225.	952–Gigondas, Domaine des Bosquets 2011...63.





The Messages Can be Complex



## Communicating Risks and Benefits

- Often involves communicating about both risks and benefits associated with particular food choices.



### Advice About Eating Fish

#### What Pregnant Women & Parents Should Know

Fish and other protein-rich foods have nutrients that can help your child's growth and development.

For women of childbearing age (about 16-49 years old), especially pregnant and breastfeeding women, and for parents and caregivers of young children,

- Eat 2 to 3 servings of fish a week from the "Best Choices" list OR 1 serving from the "Good Choices" list.
- Eat a variety of fish.
- Serve 1 to 2 servings of fish a week to children, starting at age 2.
- If you eat fish caught by family or friends, check for fish advisories. If there is no advisory, eat only one serving and no other fish that week.\*

#### Use this chart!

You can use this chart to help you choose which fish to eat, and how often to eat them, based on their mercury levels. The "Best Choices" have the lowest levels of mercury.

#### What is a serving?

To find out, use the palm of your hand!



For an adult  
4 ounces



For children,  
ages 4 to 7  
2 ounces

Best Choices EAT 2 TO 3 SERVINGS A WEEK			OR	Good Choices EAT 1 SERVING A WEEK		
Anchovy	Herring	Scallop		Bluefish	Monkfish	Tilefish (Atlantic Ocean)
Atlantic croaker	Lobster, American and spiny	Shad		Buffalofish	Rockfish	
Atlantic mackerel	Mullet	Shrimp		Carp	Sablefish	Tuna, albacore/white tuna, canned and fresh/frozen
Black sea bass	Oyster	Skate		Chilean sea bass/Patagonian toothfish	Sheepshead	Tuna, yellowfin
Butterfish	Pacific chub mackerel	Smelt		Grouper	Snapper	Weakfish/seatrout
Catfish	Perch, freshwater and ocean	Sole		Halibut	Spanish mackerel	White croaker/Pacific croaker
Clam	Pickering	Squid		Mahi mahi/dolphinfish	Striped bass (ocean)	
Cod	Pike	Tilapia				
Crab	Pollock	Trout, freshwater				
Crawfish	Salmon	Tuna, canned light (includes skipjack)				
Flounder	Sardine	Whitefish				
Haddock		Whiting				
Hake						

Choices to Avoid HIGHEST MERCURY LEVELS		
King mackerel	Shark	Tilefish (Gulf of Mexico)
Marlin	Swordfish	Tuna, bigeye
Orange roughy		

\*Some fish caught by family and friends, such as larger carp, catfish, trout and perch, are more likely to have fish advisories due to mercury or other contaminants. State advisories will tell you how often you can safely eat those fish.

[www.FDA.gov/fishadvice](http://www.FDA.gov/fishadvice) [www.EPA.gov/fishadvice](http://www.EPA.gov/fishadvice) U.S. FOOD & DRUG ADMINISTRATION




Many People Find Making the  
“Right” Food Choices is Difficult





# Whipsaw Effect in Nutrition Research

 **health** Food Fitness Wellness Parenting Vital Signs LIVE TV Ed


**LIVE**

- Analysis of Day 3 of Trump's second impeachment trial
- Biden visits National Institutes of Health

## Are eggs good or bad for you? The truth may be somewhere in between

By Sandee LaMotte, CNN

🕒 Updated 2:00 PM ET, Tue February 9, 2021



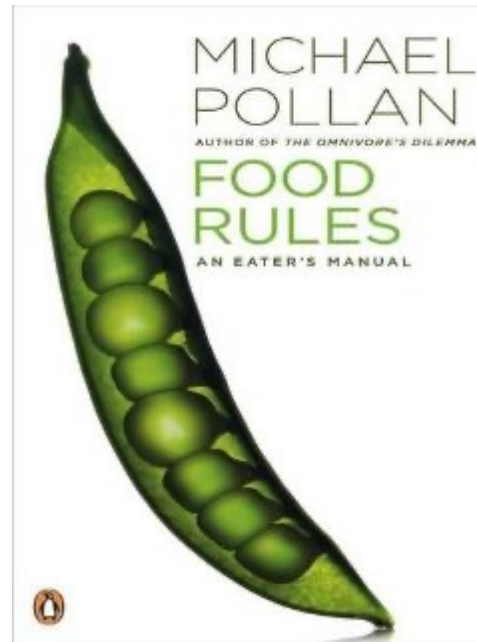
Photos: The top egg dishes around the globe



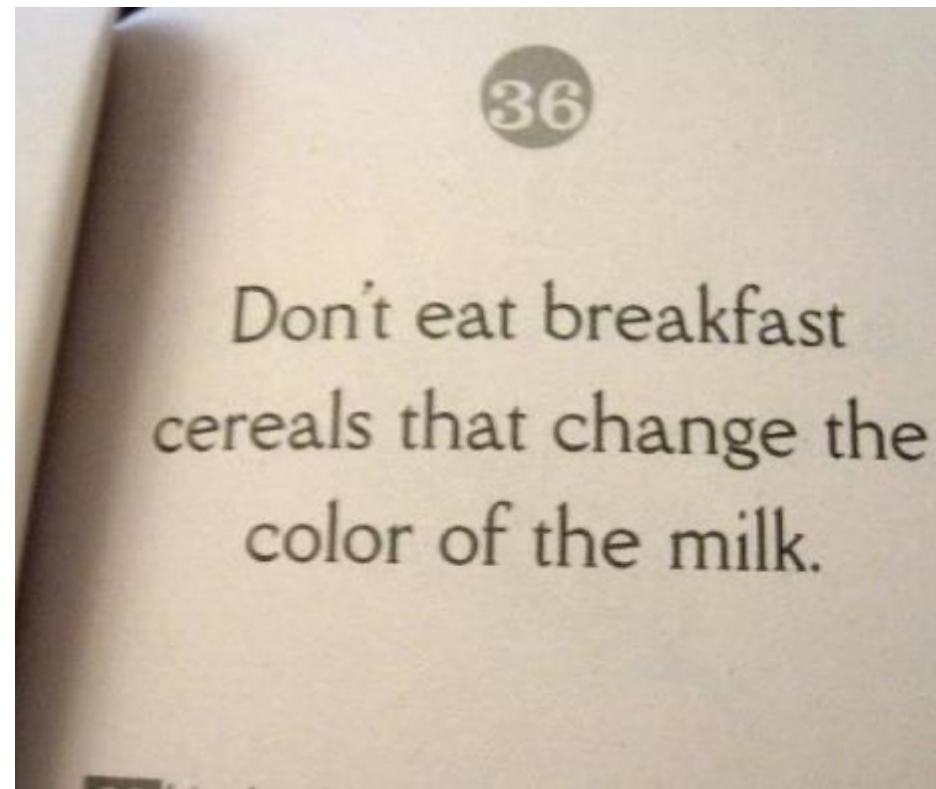
Many Rely on “Food Rules”

# People are Open to Simple Heuristics that Capture Gist

- “Eat Organic”
- “Whole foods are best”
- “Eat food. Not too much. Mostly plants.”
  - Michael Pollan



## “Rules” Depend on *Intuitive* Plausibility



Pollan, M. (2009). *Food rules: An eater's manual*. Penguin.





# Nutrient Content as a Heuristic







# Organic, Natural, and Organic as a Heuristic





# Get Real





Accept no substitutes -



# Clean Label as a Heuristic

**GO**CLEAN**LABEL**™



## WHAT IS “CLEAN LABEL”?

“Clean label is a consumer driven movement, demanding a return to ‘real food’ and transparency through authenticity. Food products containing natural, familiar, simple ingredients that are easy to recognize, understand, and pronounce. No artificial ingredients or synthetic chemicals.” — *Go Clean Label*™



## Non-GMO as a Heuristic







People Learn About Many Food “Risks”  
Through Implicit Comparisons



# What is “Free” is Best

- Pesticide Free
- Antibiotic Free
- Cage Free
- Slave Free
- Clone Free
- Cruelty Free
- Lactose Free
- Gluten Free
- MSG Free
- Salt Free
- Sugar Free
- Caffeine Free
- Fat Free
- Cholesterol Free
- Soy Free
- Dairy Free
- Wheat Free
- BPA Free
- No Artificial Colors
- No Artificial Flavors
- Chemical Free





# Conclusions

- Food is Connected to Many Aspects of our Culture and Identities
- In Making Decisions About What to Eat, Affect Often Wins
- Food Choices are Strongly Influenced by Hedonics
- The Risks and Benefits Associated with Food are Invisible, so we Depend on Proxies
- The Messages about Foods are Complex
- People Often Rely on Intuitively Plausible Heuristics/Rules
- Some Food Risks are Implied by “Free From” Claims



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