# Elements of the Information Nutrition Label

## Understanding Trigger Warnings
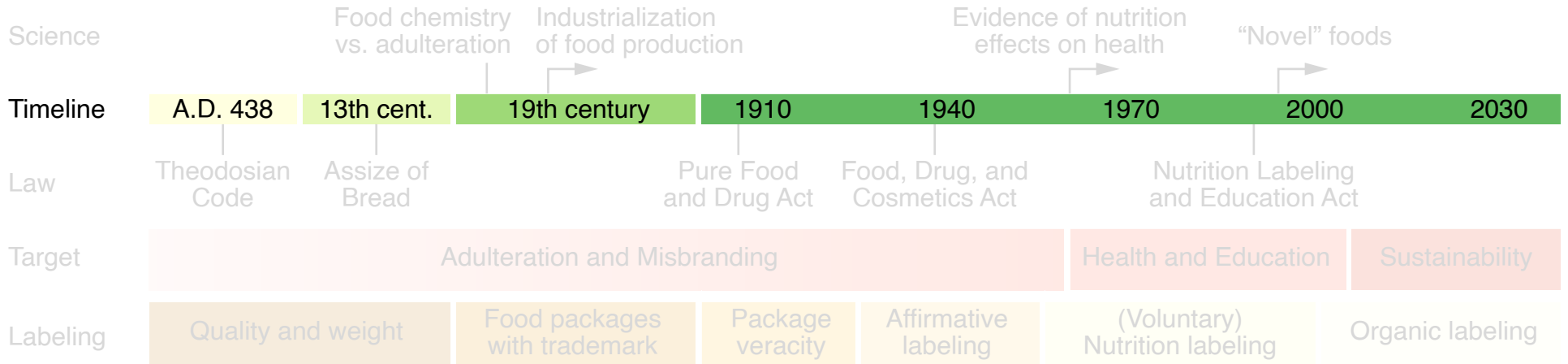
Martin Potthast

University of Kassel, hessian.AI, and ScaDS.AI

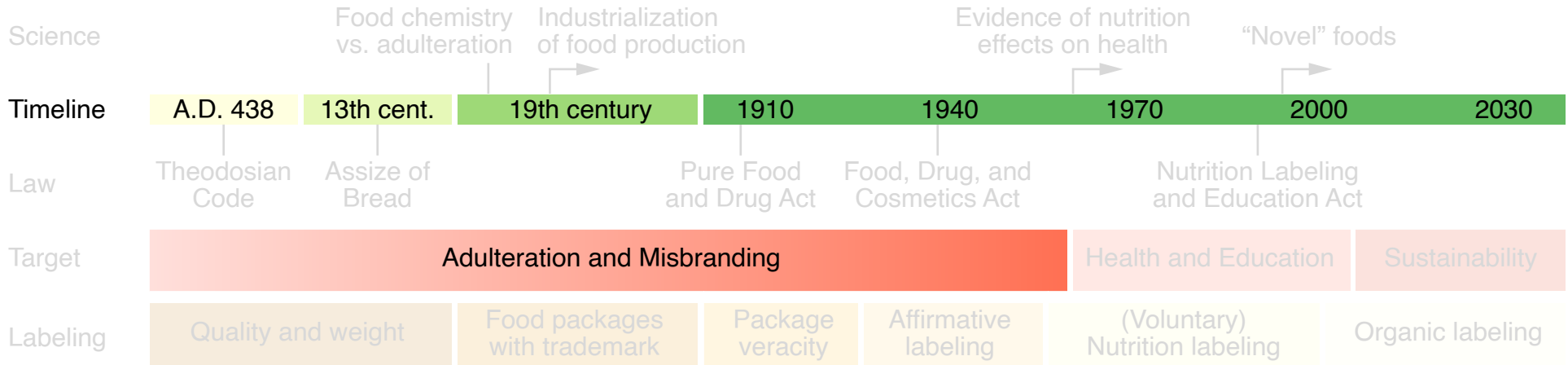December 4th, 2024

# The Information Nutrition Label
## History of Food Labeling

| Science | | Food chemistry vs. adulteration | Industrialization of food production | | Evidence of nutrition effects on health | "Novel" foods | |
|---|---|---|---|---|---|---|---|
| **Timeline** | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | 2030 |
| Law | Theodosian Code | Assize of Bread | | Pure Food and Drug Act | Food, Drug, and Cosmetics Act | Nutrition Labeling and Education Act | | |
| Target | Adulteration and Misbranding | | | | | Health and Education | Sustainability | |
| Labeling | Quality and weight | | Food packages with trademark | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | Organic labeling | |

- ❑ Producers and consumers have an information asymmetry concerning ingredients.

- ❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

- ❑ Nutrition facts labels are dedicated to educating society.

- ❑ Modern European legislation lagged behind the US almost 70 years.
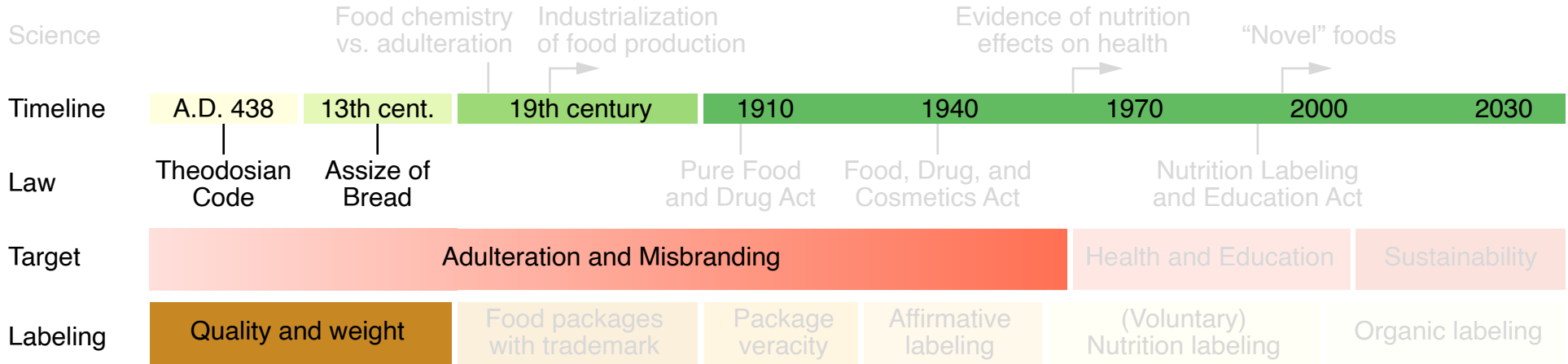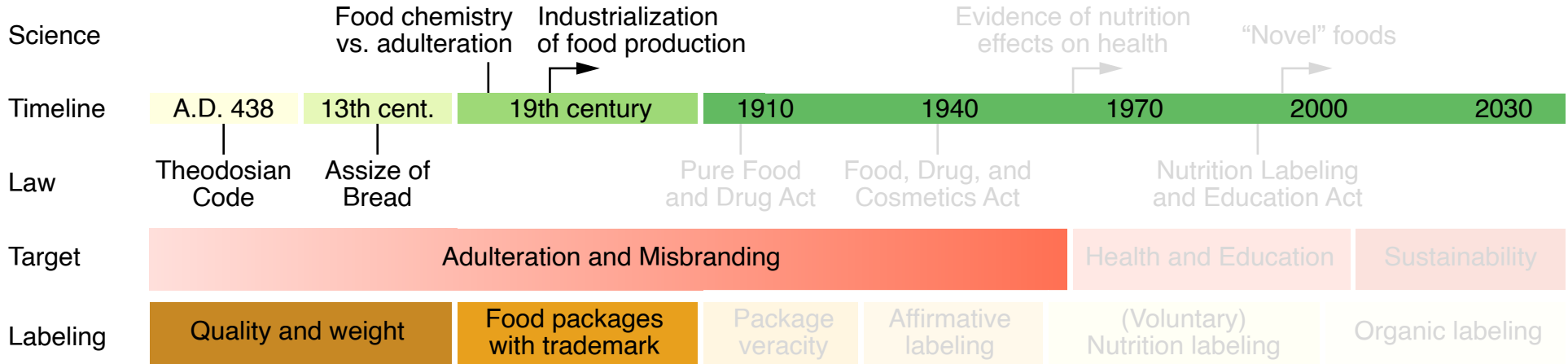
# The Information Nutrition Label
## History of Food Labeling

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Science** | | | Food chemistry vs. adulteration | Industrialization of food production | | Evidence of nutrition effects on health | "Novel" foods | |
| **Timeline** | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | 2030 |
| **Law** | Theodosian Code | Assize of Bread | | Pure Food and Drug Act | Food, Drug, and Cosmetics Act | Nutrition Labeling and Education Act | | |
| **Target** | Adulteration and Misbranding | | | | | Health and Education | | Sustainability |
| **Labeling** | Quality and weight | | Food packages with trademark | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | | Organic labeling |

❑ Producers and consumers have an information asymmetry concerning ingredients.

❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

❑ Nutrition facts labels are dedicated to educating society.

❑ Modern European legislation lagged behind the US almost 70 years.
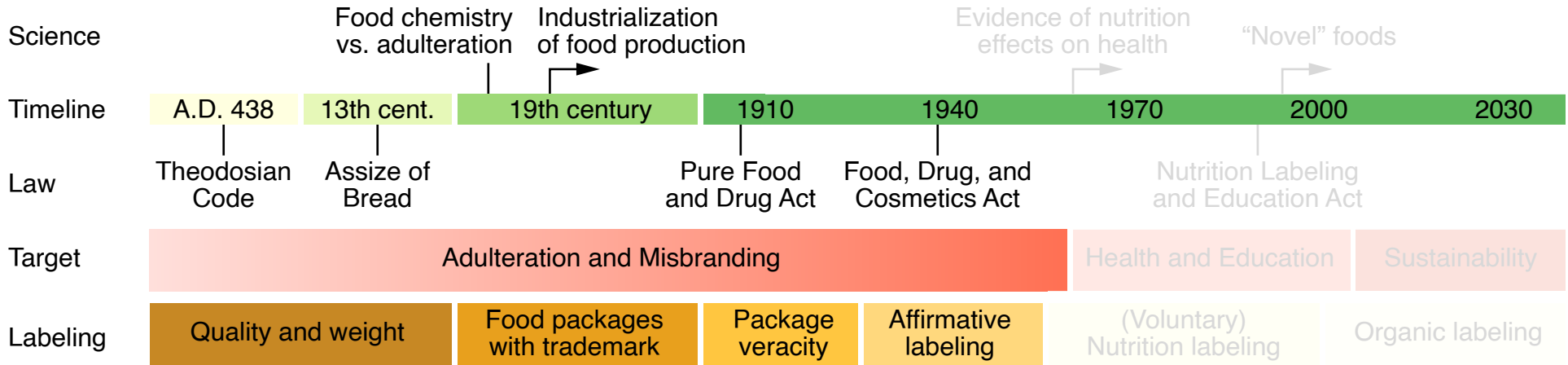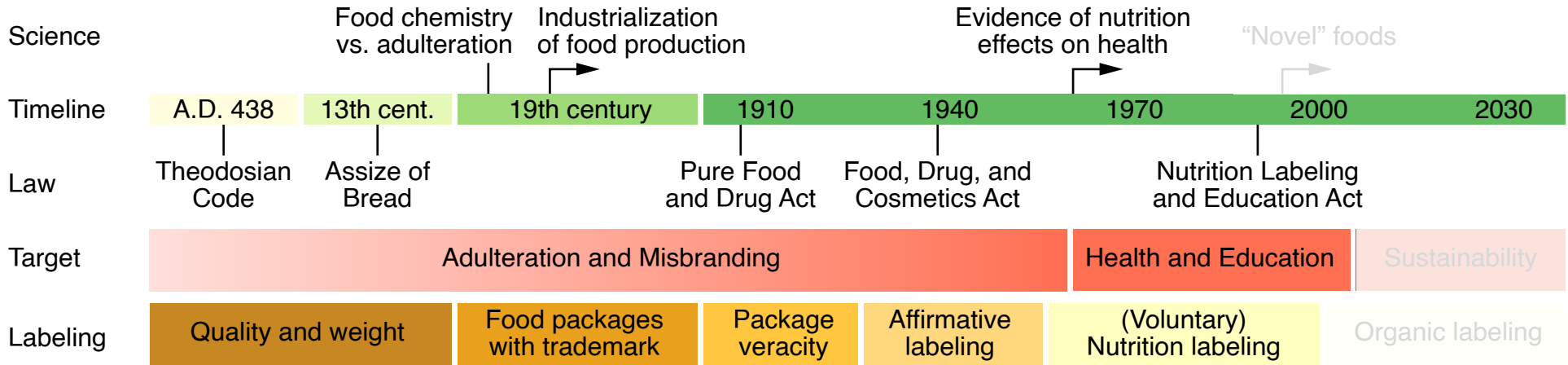
# The Information Nutrition Label

## History of Food Labeling

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Science | | | Food chemistry vs. adulteration | Industrialization of food production | | Evidence of nutrition effects on health | "Novel" foods | |
| Timeline | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | 2030 |
| Law | Theodosian Code | Assize of Bread | | Pure Food and Drug Act | Food, Drug, and Cosmetics Act | | Nutrition Labeling and Education Act | |
| Target | Adulteration and Misbranding | | | | | Health and Education | | Sustainability |
| Labeling | Quality and weight | | Food packages with trademark | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | | Organic labeling |

❑ Producers and consumers have an information asymmetry concerning ingredients.

❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

❑ Nutrition facts labels are dedicated to educating society.

❑ Modern European legislation lagged behind the US almost 70 years.
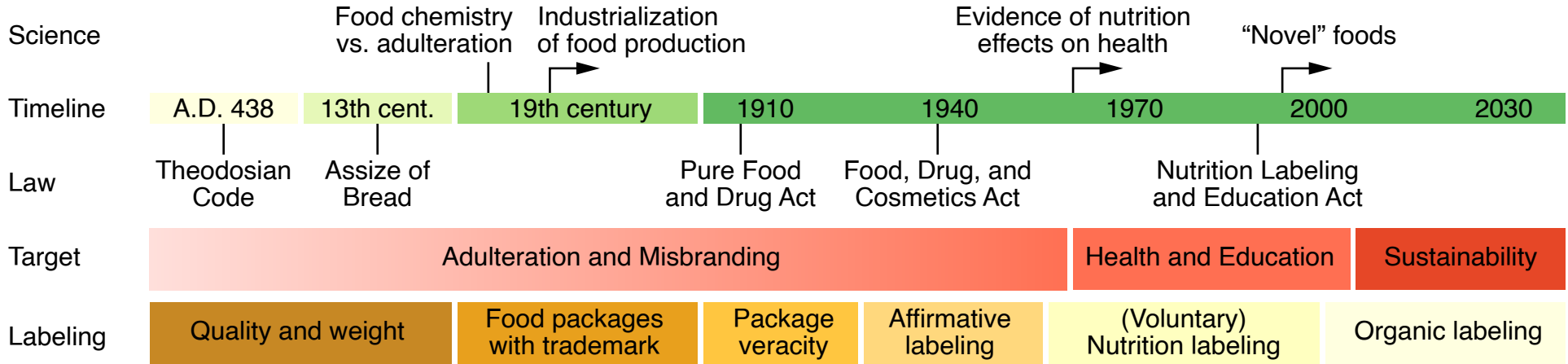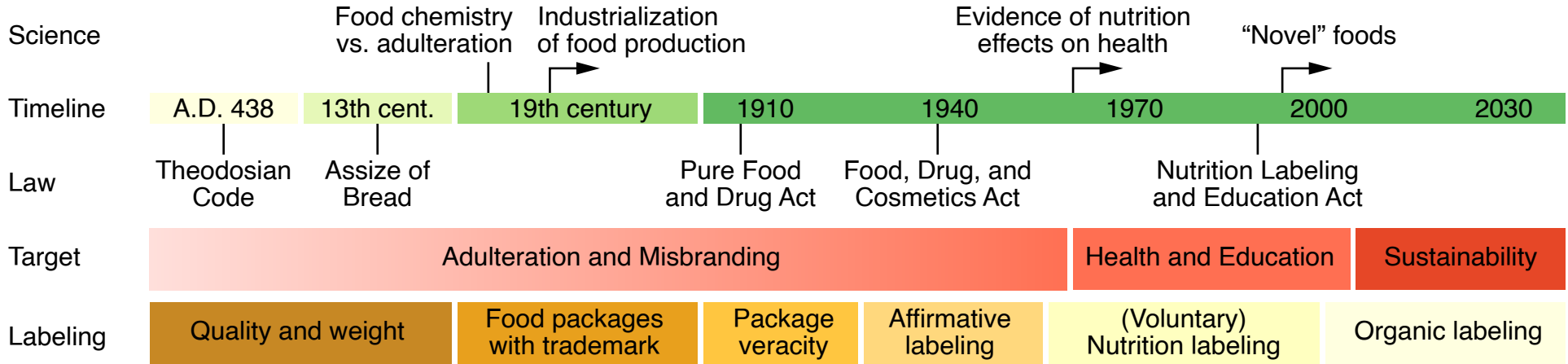
# The Information Nutrition Label

## History of Food Labeling

| | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | 2030 |
|---|---|---|---|---|---|---|---|---|
| **Science** | | | Food chemistry vs. adulteration / Industrialization of food production | | | Evidence of nutrition effects on health | "Novel" foods | |
| **Timeline** | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | 2030 |
| **Law** | Theodosian Code | Assize of Bread | | Pure Food and Drug Act | Food, Drug, and Cosmetics Act | | Nutrition Labeling and Education Act | |
| **Target** | Adulteration and Misbranding | | | | | Health and Education | | Sustainability |
| **Labeling** | Quality and weight | | Food packages with trademark | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | | Organic labeling |

- ❑ Producers and consumers have an information asymmetry concerning ingredients.

- ❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

- ❑ Nutrition facts labels are dedicated to educating society.

- ❑ Modern European legislation lagged behind the US almost 70 years.

# The Information Nutrition Label
## History of Food Labeling

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Science** | | | Food chemistry vs. adulteration | Industrialization of food production | | | Evidence of nutrition effects on health | | "Novel" foods | |
| **Timeline** | A.D. 438 | 13th cent. | 19th century | | 1910 | 1940 | 1970 | 2000 | | 2030 |
| **Law** | Theodosian Code | Assize of Bread | | | Pure Food and Drug Act | Food, Drug, and Cosmetics Act | | Nutrition Labeling and Education Act | | |
| **Target** | Adulteration and Misbranding | | | | | | Health and Education | | Sustainability | |
| **Labeling** | Quality and weight | | Food packages with trademark | | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | | Organic labeling | |

- ❑ Producers and consumers have an information asymmetry concerning ingredients.

- ❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

- ❑ Nutrition facts labels are dedicated to educating society.

- ❑ Modern European legislation lagged behind the US almost 70 years.

# The Information Nutrition Label
## History of Food Labeling

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Science** | | | Food chemistry vs. adulteration | Industrialization of food production | | Evidence of nutrition effects on health | "Novel" foods | |
| **Timeline** | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | 2030 |
| **Law** | Theodosian Code | Assize of Bread | | Pure Food and Drug Act | Food, Drug, and Cosmetics Act | Nutrition Labeling and Education Act | | |
| **Target** | Adulteration and Misbranding | | | | | Health and Education | Sustainability | |
| **Labeling** | Quality and weight | | Food packages with trademark | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | Organic labeling | |

❑ Producers and consumers have an information asymmetry concerning ingredients.

❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

❑ Nutrition facts labels are dedicated to educating society.

❑ Modern European legislation lagged behind the US almost 70 years.

# The Information Nutrition Label

## History of Food Labeling

| | Science | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|

**Science:** Food chemistry vs. adulteration • Industrialization of food production • Evidence of nutrition effects on health • "Novel" foods

| Timeline | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | 2030 |
|---|---|---|---|---|---|---|---|---|

**Law:** Theodosian Code • Assize of Bread • Pure Food and Drug Act • Food, Drug, and Cosmetics Act • Nutrition Labeling and Education Act

| Target | Adulteration and Misbranding | | | | Health and Education | Sustainability |
|---|---|---|---|---|---|---|

| Labeling | Quality and weight | Food packages with trademark | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | Organic labeling |
|---|---|---|---|---|---|---|

- ❑ Producers and consumers have an information asymmetry concerning ingredients.

- ❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

- ❑ Nutrition facts labels are dedicated to educating society.

- ❑ Modern European legislation lagged behind the US almost 70 years.

# The Information Nutrition Label
## History of Food Labeling

| Science | | | Food chemistry vs. adulteration | Industrialization of food production | | | Evidence of nutrition effects on health | "Novel" foods | |
|---|---|---|---|---|---|---|---|---|---|
| Timeline | A.D. 438 | 13th cent. | 19th century | 1910 | 1940 | 1970 | 2000 | | 2030 |
| Law | Theodosian Code | Assize of Bread | | Pure Food and Drug Act | Food, Drug, and Cosmetics Act | | Nutrition Labeling and Education Act | | |
| Target | Adulteration and Misbranding | | | | | | Health and Education | | Sustainability |
| Labeling | Quality and weight | | Food packages with trademark | Package veracity | Affirmative labeling | (Voluntary) Nutrition labeling | | Organic labeling | |

- ❑ Producers and consumers have an information asymmetry concerning ingredients.

- ❑ Early regulation addressed mostly fraud (for fear of civil unrest about lacking food).

- ❑ Nutrition facts labels are dedicated to educating society.

- ❑ Modern European legislation lagged behind the US almost 70 years.

# The Information Nutrition Label
## Food Label Design: Format and Presentation

**Control**

NUTRITION INFORMATION PER SERVING

Serving Size ¼ box (45g) ¾ cup prepared
Servings per Container: 4

**AS PREPARED**

| | |
|---|---|
| Calories | 270 |
| Calories from fat | 105 |

**AMOUNT**

| | |
|---|---|
| Fat | 13 g |
| Saturated Fat | 6 g |
| Cholesterol | 30 mg |
| Sodium | 660 mg |
| Carbohydrates | 31 mg |
| Fiber | 0 g |
| Protein | 5 g |

**PERCENT OF DAILY VALUE**

| | |
|---|---|
| Vitamin A | 4 |
| Vitamin C | ‡ |
| Calcium | 12 |
| Iron | 10 |

† As part of a 2,350 calorie diet
‡ Contains less than 2 percent of the DV of this nutrient

---

**Control with DRV**

NUTRITION INFORMATION PER SERVING

Serving Size ¼ box (45g) ¾ cup prepared
Servings per Container: 4

**AS PREPARED**

| | |
|---|---|
| Calories | 270 |
| Calories from fat | 105 |

| | AMOUNT | DAILY VALUE (DV) † |
|---|---|---|
| Fat | 13 g | 75 g or less |
| Saturated Fat | 6 g | 25 g or less |
| Cholesterol | 30 mg | 300 mg or less |
| Sodium | 660 mg | 2,400 mg or less |
| Carbohydrates | 31 mg | 325 g or less |
| Fiber | 0 g | 25 g |
| Protein | 5 g | |

**PERCENT OF DAILY VALUE**

| | |
|---|---|
| Vitamin A | 4 |
| Vitamin C | ‡ |
| Calcium | 12 |
| Iron | 10 |

† As part of a 2,350 calorie diet
‡ Contains less than 2 percent of the DV of this nutrient

---

**Adjectives**

NUTRITION INFORMATION PER SERVING

Serving Size 1 oz slice (26g)
Servings per Box: 14

| | |
|---|---|
| Calories | 70 |
| Calories from fat | 0 |

| | AMOUNT | DAILY VALUE (DV) † |
|---|---|---|
| Fat | LOW 0 g | 75 g or less |
| Saturated Fat | LOW 0 g | 25 g or less |
| Cholesterol | LOW 0 mg | 300 mg or less |
| Sodium | LOW 115 mg | 2,400 mg or less |
| Carbohydrates | MEDIUM 16 mg | 325 g or less |
| Fiber | LOW 0 g | 25 g |

**PERCENT OF DAILY VALUE**

| | |
|---|---|
| Protein | LOW 2 |
| Vitamin A | LOW ‡ |
| Vitamin C | LOW ‡ |
| Calcium | LOW ‡ |
| Iron | LOW ‡ |

† As part of a 2,350 calorie diet
‡ Contains less than 2 percent of the DV of this nutrient

---

**% Daily Value with DRV**

NUTRITION INFORMATION PER SERVING

Serving Size: 4 ounces condensed
    1 cup (244g) as prepared
Servings per Box: 2 ¾

| | |
|---|---|
| Calories | 90 |
| Calories from fat | 30 |

| | PERCENT OF DV | DAILY VALUE (DV) † |
|---|---|---|
| Fat (3g) | 4 | 75 g or less |
| Saturated Fat (0g) | 0 | 25 g or less |
| Cholesterol (5mg) | 2 | 300 mg or less |
| Sodium (910mg) | 35 | 2,400 mg or less |
| Carbohydrates (12g) | 4 | 325 g or less |
| Fiber (0g) | 0 | 25 g |
| Protein (5g) | 11 | |

| | |
|---|---|
| Vitamin A | ‡ |
| Vitamin C | 2 |
| Calcium | 4 |
| Iron | 8 |

† As part of a 2,350 calorie diet
‡ Contains less than 2 percent of the DV of this nutrient

---

**% Daily Value without DRV**

NUTRITION INFORMATION PER SERVING

Serving Size: ¼ box (45g) ¾ cup prepared
Servings per Box: 4

| | |
|---|---|
| Calories | 270 |
| Calories from fat | 105 |

| | PERCENT OF DV |
|---|---|
| Fat (13g) | 17 |
| Saturated Fat (5g) | 20 |
| Cholesterol (30mg) | 10 |
| Sodium (660mg) | 28 |
| Carbohydrates (31g) 10 | |
| Fiber (0g) | 0 |
| Protein (5g) | 10 |

| | |
|---|---|
| Vitamin A | 4 |
| Vitamin C | ‡ |
| Calcium | 12 |
| Iron | 10 |

† As part of a 2,350 calorie diet
‡ Contains less than 2 percent of the DV of this nutrient

---

**Grouping**

NUTRITION INFORMATION PER SERVING

Single Serving Size 6 fl oz (156g) ¾ cup
Servings per Container: 2 ½

| | |
|---|---|
| Calories | 150 |
| Calories from fat | 45 |

**CHOOSE A DIET LOW IN: AMOUNT   DAILY VALUE (DV) †**

| | | |
|---|---|---|
| Fat | 17 g | 75 g or less |
| Saturated Fat | 20 g | 25 g or less |
| Cholesterol | 10 | 300 mg or less |
| Sodium | 25 | 2,400 mg or less |

**CHOOSE A DIET HIGH IN:**

| | | |
|---|---|---|
| Carbohydrates | 27 g | 325 mg or more |
| Fiber | 0 g | 25 g |

**PERCENT OF DAILY VALUE**

| | |
|---|---|
| Protein | 4 |
| Vitamin A | 2 |
| Vitamin C | 2 |
| Calcium | 20 |
| Iron | 2 |

† As part of a 2,350 calorie diet

---

**Highlighting**

NUTRITION INFORMATION PER SERVING

Single Serving Size 6 fl oz (156g) ¾ cup
Servings per Container: 2 ½

| | |
|---|---|
| Calories | 150 |
| Calories from fat | 45 |

| | AMOUNT | DAILY VALUE (DV) † |
|---|---|---|
| Fat | 6 g | 75 g or less |
| Saturated Fat | 0 g* | 25 g or less |
| Cholesterol | 0 mg* | 300 mg or less |
| Sodium | 20 mg* | 2,400 mg or less |
| Carbohydrates | 27 mg | 325 g or more |
| Fiber | 0 g | 25 g |
| Protein | 2 g | |

**PERCENT DAILY VALUE**

| | |
|---|---|
| Vitamin A | 2 |
| Vitamin C | 2 |
| Calcium | 20** |
| Iron | 2 |

† As part of a 2,350 calorie diet
Meets FDA definitions and is consistent with dietary recommendations as:
    *Low or reduced in amount per serving
    **High in amount per serving

---

- List of nutrients

- Absolute vs relative amounts (daily recommended value, DRV)

- Erring on the side of caution: low daily calories, but high daily nutrients

- Serving sizes based average consumption and household measures per foot item category

# The Information Nutrition Label
## Food Label Design: Format and Presentation



Old Food Label

New Food Label

- Format optimization with focus group studies completing tasks.

- Expert designers for graphic design.

- Studies to optimize comprehension, legibility, and literacy.

# The Information Nutrition Label
## Related Initiatives

- ❏ **Broadband Facts Label**

- ❏ Knowledge Panel on Search Results

- ❏ Privacy Facts Label

- ❏ Model Cards for AI

- ❏ Data Cards for AI

- ❏ Information Nutrition Label

- ❏ Garment Facts Label

- ❏ Publication Facts Label

---

- United States Federal Communications Commission (FCC). 2013.

**Broadband Facts**

Acme Wireless
**50 Gigabit Data Plan**
Mobile Broadband Consumer Disclosure

| **Monthly Price** | **$75.00** |
|---|---|
| This monthly price is an introductory rate | No |
| Time the introductory rate applies | n/a |
| Monthly price after the introductory rate | n/a |
| Length of contract | n/a |
| Link to Terms of Contract https://www.example.com/terms-of-contract | |

**Additional Charges & Terms**

Provider Monthly Fees
| Device Installment Payment | $66.67 |
|---|---|
| Device Insurance Coverage | $3.99 |
| Voicemail | $1.00 |

One-Time Purchase Fees
| Activation Fee | $36.00 |
|---|---|

| Early Termination Fee | n/a |
|---|---|
| Government Taxes | Included |

**Discounts & Bundles**

Visit the link below for available billing discounts and pricing options for broadband service bundled with other services like video, phone, and wireless service, and use of your own equipment like modems and routers.

https://www.example.com/discounts

**Speeds Provided with Plan**

| Typical Download Speed | 35 Mbps |
|---|---|
| Typical Upload Speed | 5 Mbps |
| Typical Latency | 30 ms |

| **Data Included with Monthly Price** | **50 GB** |
|---|---|
| Charges for Additional Data Usage | $5/GB |
| https://www.example.com/data-usage | |

**Network Management Policy**
https://www.example.com/network-management
**Privacy Policy**
https://www.example.com/privacy

**Customer Support**
Phone: (555) 555-5555
Website: https://www.example.com

Learn about the terms used on this label. Visit the Federal Communications Commission's Consumer Resource Center.

**fcc.gov/consumer**

Unique Plan Identifier: F0005937974123ABC456EMC789

# The Information Nutrition Label
## Related Initiatives

- ❑ **Broadband Facts Label**

- ❑ **Knowledge Panel on Search Results**

- ❑ Privacy Facts Label

- ❑ Model Cards for AI

- ❑ Data Cards for AI

- ❑ Information Nutrition Label

- ❑ Garment Facts Label

- ❑ Publication Facts Label

About

Alan Mathison Turing was an English mathematician, computer scientist, logician, cryptanalyst, philosopher and theoretical biologist. Wikipedia

**Born:** June 23, 1912, Maida Vale, London, United Kingdom

**Died:** June 7, 1954 (age 41 years), Wilmslow, United Kingdom

**Movies:** The Man Who Cracked the Nazi Code

**Education:** Princeton University (1936–1938) · See more

**Influenced by:** Alonzo Church, Kurt Gödel, Ludwig Wittgenstein

**Parents:** Julius Mathison Turing, Ethel Sara Stoney

Feedback

People also search for

Joan Clarke    Ada Lovelace    Tommy Flowers    Herman Hollerith

See more →

- • A. Singhal. Introducing the Knowledge Graph: things, not strings. 2012.

# The Information Nutrition Label
## Related Initiatives

❑ Broadband Facts Label

❑ Knowledge Panel on Search Results

❑ Privacy Facts Label

❑ Model Cards for AI

❑ Data Cards for AI

❑ Information Nutrition Label

❑ Garment Facts Label

❑ Publication Facts Label

---

• Apple. What's new in privacy on the App Store. 2023.

# The Information Nutrition Label
## Related Initiatives

- Broadband Facts Label

- Knowledge Panel on Search Results

- Privacy Facts Label

- Model Cards for AI

- Data Cards for AI

- Information Nutrition Label

- Garment Facts Label

- Publication Facts Label

---

- M. Mitchell et al. Model Cards for Model Reporting. 2018.
- M. Pushkarna et al. Data Cards: Purposeful and Transparent Dataset Documentation for Responsible AI. 2022.
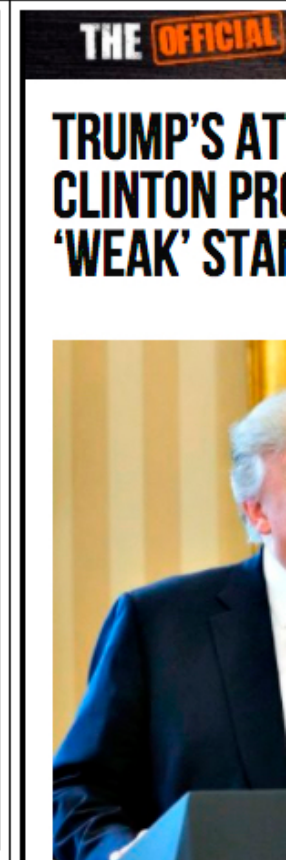
**Model Card**

- **Model Details**. Basic information about the model.
  - Person or organization developing model
  - Model date
  - Model version
  - Model type
  - Information about training algorithms, parameters, fairness constraints or other applied approaches, and features
  - Paper or other resource for more information
  - Citation details
  - License
  - Where to send questions or comments about the model
- **Intended Use**. Use cases that were envisioned during development.
  - Primary intended uses
  - Primary intended users
  - Out-of-scope use cases
- **Factors**. Factors could include demographic or phenotypic groups, environmental conditions, technical attributes, or others listed in Section 4.3.
  - Relevant factors
  - Evaluation factors
- **Metrics**. Metrics should be chosen to reflect potential real-world impacts of the model.
  - Model performance measures
  - Decision thresholds
  - Variation approaches
- **Evaluation Data**. Details on the dataset(s) used for the quantitative analyses in the card.
  - Datasets
  - Motivation
  - Preprocessing
- **Training Data**. May not be possible to provide in practice. When possible, this section should mirror Evaluation Data. If such detail is not possible, minimal allowable information should be provided here, such as details of the distribution over various factors in the training datasets.
- **Quantitative Analyses**
  - Unitary results
  - Intersectional results
- **Ethical Considerations**
- **Caveats and Recommendations**

# The Information Nutrition Label
## Related Initiatives

- ❏ Broadband Facts Label

- ❏ Knowledge Panel on Search Results

- ❏ Privacy Facts Label

- ❏ Model Cards for AI

- ❏ Data Cards for AI

- ❏ Information Nutrition Label

- ❏ Garment Facts Label

- ❏ Publication Facts Label

| INFORMATION NUTRITION LABEL | | |
|---|---|---|
| Best Before: Jan 1, 2018 | | |
| Per 1000 words | | Recommended Daily Allowance |
| Fact | 30% | 60 % |
| Opinion | 40% | 20 % |
| Controversy | 9.0 | -- |
| Emotion | 6.7 | 1.3 |
| Topicality | 8.7 | 5.0 |
| Reading Level | 4.0 | 8.0 |
| Technicality | 2.0 | -- |
| Authority | 4.3 | 9.0 |
| Viralness | -- | 1.0 |
| Additional substances: advertising, subscription, invective, images (2), tweets, video clips | | |
| Traces: product placement | | |

THE **OFFICIAL**

**TRUMP'S AT
CLINTON PRO
'WEAK' STAN**

- • N. Fuhr et al. An Information Nutritional Label for Online Documents. 2017.

# The Information Nutrition Label
## Related Initiatives

- ❑ Broadband Facts Label

- ❑ Knowledge Panel on Search Results

- ❑ Privacy Facts Label

- ❑ Model Cards for AI

- ❑ Data Cards for AI

- ❑ Information Nutrition Label

- ❑ Garment Facts Label

- ❑ Publication Facts Label

---

- • P. Gorse. Would you buy this garment? 2022.

| Garments Facts | |
|---|---|
| Total number | |
| Synthetic chemicals | 112 |
| Weight of chemicals per 100g | 25g |
| Synthetic dye | Red F5-B |
| Date of Manufacture | 21/04/2022 |
| Factory (cutting/sewing) | |
| Energy Source | 100% Coal |
| Can be worn (minimum) | |
| Quality | 40 times |
| Total distance (km) | |
| Supply Chain | 25,432 |
| Number of Countries visited | 3 |
| Total number | |
| Materials Used | 2 |
| Fabric | cotton |
| Trim | cotton |
| Thread | (plastic) polyester |
| Zip/Buttons | n/a |
| Total shed per 6kg wash | |
| Microfibres | 137,951 |
| Cambodia average pcm ($) | |
| Textile Workers Pay | 250 |
| Percentage of living wage | 45% |

# The Information Nutrition Label
## Related Initiatives

- ❑ Broadband Facts Label

- ❑ Knowledge Panel on Search Results

- ❑ Privacy Facts Label

- ❑ Model Cards for AI

- ❑ Data Cards for AI

- ❑ Information Nutrition Label

- ❑ Garment Facts Label

- ❑ Publication Facts Label

**Publication Facts**

| This article | Other articles |
|---|---|
| **Peer reviewers 2** | 2.4 |
| Reviewer ⓘ profiles | |
| **Author Statements** | |
| Data availability Yes | 18% |
| External Funding Yes | 32% |
| Competing Interests No | 3% |

| This journal | Other journals |
|---|---|
| **Articles accepted 23%** | 38% |
| Days to publication 134 | 145 |
| **Indexed in** DO GS S WS | |
| **Editor & editorial board** ⓘ profiles | |
| Academic Society FRHS | |
| Publisher Waismann Journals | |

To learn about these publications facts, click ⓘ
**PF** is maintained by the Public Knowledge Project

- Willinsky and Pimentel. The publication facts label: A public and professional guide for research articles. 2024.

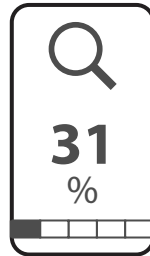# The Information Nutrition Label
## Research at Webis

- Designing the information nutrition label requires interdisciplinary expertise.

- What are relevant "nutrients" of information?

- What are daily recommended values per measure?

- What are "household" measures of these nutrients?
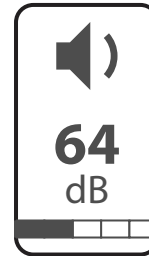
- How can an information nutrition label be validated?
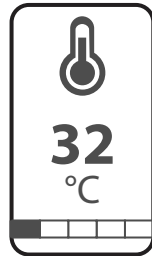
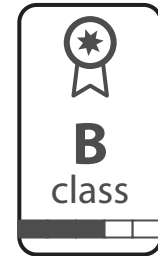| 17 min | 32 °C | 31 % | 64 dB | B class |
|--------|-------|------|-------|---------|
| verbosity | virality | verifiability | emotionality | reliability |

# The Information Nutrition Label
## Research at Webis
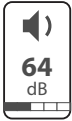
| | | | | |
|---|---|---|---|---|
| 🕐 **17** min | 🌡 **32** °C | 🔍 **31** % | 🔊 **64** dB | **B** class |
| verbosity | **virality** | verifiability | emotionality | reliability |

## Clickbait Analytics

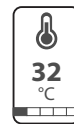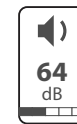| | | | | | | |
|---|---|---|---|---|---|---|
| Clickbait Detection | Crowdsourcing Twitter Clickbait | Studying YouTube Clickbait | Clickbait Detection Challenge | Longitudinal User Engagement | Clickbait Spoiling | Clickbait Spoiling Challenge |

# The Information Nutrition Label
## Research at Webis

| | | | | |
|---|---|---|---|---|
| **17** min | **32** °C | **31** % | **64** dB | **B** class |
| verbosity | virality | **verifiability** | emotionality | reliability |

## Clickbait Analytics

| Clickbait Detection | Crowdsourcing Twitter Clickbait | Studying YouTube Clickbait | Clickbait Detection Challenge | Longitudinal User Engagement | Clickbait Spoiling | Clickbait Spoiling Challenge |
|---|---|---|---|---|---|---|

## Verifiable Language Generation

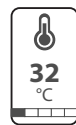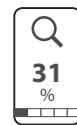| Dilemma of the Direct Answer | [1] Retrieval-augmented Generation | ∞ The Infinite Index | Search Biases | Ad Native Advertising |
|---|---|---|---|---|

# The Information Nutrition Label
## Research at Webis

| | | | | |
|---|---|---|---|---|
| 🕐 **17** min | 🌡 **32** °C | 🔍 **31** % | 🔊 **64** dB | 🎖 **B** class |
| verbosity | virality | verifiability | **emotionality** | reliability |

## Clickbait Analytics

Clickbait Detection · Crowdsourcing Twitter Clickbait · Studying YouTube Clickbait · Clickbait Detection Challenge · Longitudinal User Engagement · Clickbait Spoiling · Clickbait Spoiling Challenge

## Verifiable Language Generation

Dilemma of the Direct Answer · [1] Retrieval-augmented Generation · ∞ The Infinite Index · Search Biases · Ad Native Advertising

## Trigger Warnings

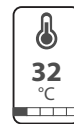Understanding Trigger Warnings · Trigger Warning Consistency · Trigger Detection · Trigger Detection Challenge

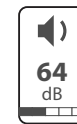# The Information Nutrition Label
## Research at Webis

| 17 min | 32 °C | 31 % | 64 dB | B class |
|--------|-------|------|-------|---------|
| verbosity | virality | verifiability | emotionality | reliability |

## Clickbait Analytics

Clickbait Detection | Crowdsourcing Twitter Clickbait | Studying YouTube Clickbait | Clickbait Detection Challenge | Longitudinal User Engagement | Clickbait Spoiling | Clickbait Spoiling Challenge

## Verifiable Language Generation

Dilemma of the Direct Answer | [1] Retrieval-augmented Generation | The Infinite Index | Search Biases | Ad Native Advertising

## Trigger Warnings

Understanding Trigger Warnings | Trigger Warning Consistency | Trigger Detection | Trigger Detection Challenge

## Human Values in Argumentation

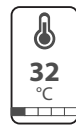Human Value Identification | ValueEval Challenge | Value Classification Demo
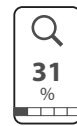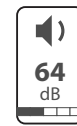
# The Information Nutrition Label
## Research at Webis

| | | | | |
|---|---|---|---|---|
| 🕐 **17** min | 🌡️ **32** ℃ | 🔍 **31** % | 🔊 **64** dB | 🎖️ **B** class |
| verbosity | virality | verifiability | emotionality | reliability |

## Clickbait Analytics

| | | | | | |
|---|---|---|---|---|---|
| Clickbait Detection | Crowdsourcing Twitter Clickbait | Studying YouTube Clickbait | Clickbait Detection Challenge | Longitudinal User Engagement | Clickbait Spoiling |
| Clickbait Spoiling Challenge | | | | | |

## Verifiable Language Generation

| | | | | |
|---|---|---|---|---|
| Dilemma of the Direct Answer | [1] Retrieval-augmented Generation | ∞ The Infinite Index | Search Biases | Ad Native Advertising |

## Trigger Warnings

| | | | |
|---|---|---|---|
| Understanding Trigger Warnings | Trigger Warning Consistency | Trigger Detection | Trigger Detection Challenge |

## Human Values in Argumentation

| | | |
|---|---|---|
| Human Value Identification | ValueEval Challenge | Value Classification Demo |

## News Anlaytics

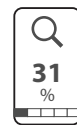| | | | | | |
|---|---|---|---|---|---|
| Hyperpartisanship Detection | Hyperpartisanship Detection Challenge | Political Bias Analysis | Bias Flipping | Reframing | Editorial Persuasiveness |

# The Information Nutrition Label
## Research at Webis

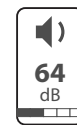| 🕐 **17** min | 🌡 **32** ℃ | 🔍 **31** % | 🔊 **64** dB | **B** class |
|---|---|---|---|---|
| verbosity | virality | verifiability | emotionality | reliability |

## Clickbait Analytics

Clickbait Detection | Crowdsourcing Twitter Clickbait | Studying YouTube Clickbait | Clickbait Detection Challenge | Longitudinal User Engagement | Clickbait Spoiling | Clickbait Spoiling Challenge

## Verifiable Language Generation

Dilemma of the Direct Answer | [1] Retrieval-augmented Generation | ∞ The Infinite Index | Search Biases | Ad Native Advertising

## Trigger Warnings

Understanding Trigger Warnings | Trigger Warning Consistency | Trigger Detection | Trigger Detection Challenge

## Human Values in Argumentation

Human Value Identification | ValueEval Challenge | Value Classification Demo

## News Anlaytics

Hyperpartisanship Detection | Hyperpartisanship Detection Challenge | Political Bias Analysis | Bias Flipping | Reframing | Editorial Persuasiveness

## Authorship Analytics

Authorship Identification | Unmasking | Authorship Obfuscation | Voight-Kampff Generated Text Detection | PAN Network on Digital Text Forensics

# Who should make the moral judgment?



**More power to the machine?**

- ❏ effectively installed
- ❏ standardized guardrailing
- ❏ protection of vulnerable groups
- ❏ . . .

**Empower the user?**

- ❏ raise awareness
- ❏ support deliberation
- ❏ demonstrate mechanisms
- ❏ provide meta information
- ❏ . . .

# Who should make the moral judgment?



*Power is nothing if it is not the power to choose.*
*Instrumental reason can make decisions, but*
*there is all the difference between deciding and choosing.*

Joseph Weizenbaum