Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Environmental product information from the psychological point of view

Christina Tobler

ETH Zurich, Institute for Environmental Decisions (IED), Consumer Behavior

Outline

1. Why environmental product information?
2. Evaluability principle
3. The role of negative labels
4. Conclusions

Categorization of Quality Dimensions

- **Search**: at time of purchase (e.g., appearance)
- **Experience**: after purchase (e.g., taste)
- **Credence**: consumer has to trust judgement of others (e.g., healthiness or environmental friendliness)

  ➔ Communication:
  - Credibility of (information from) source
  - Ability to process information

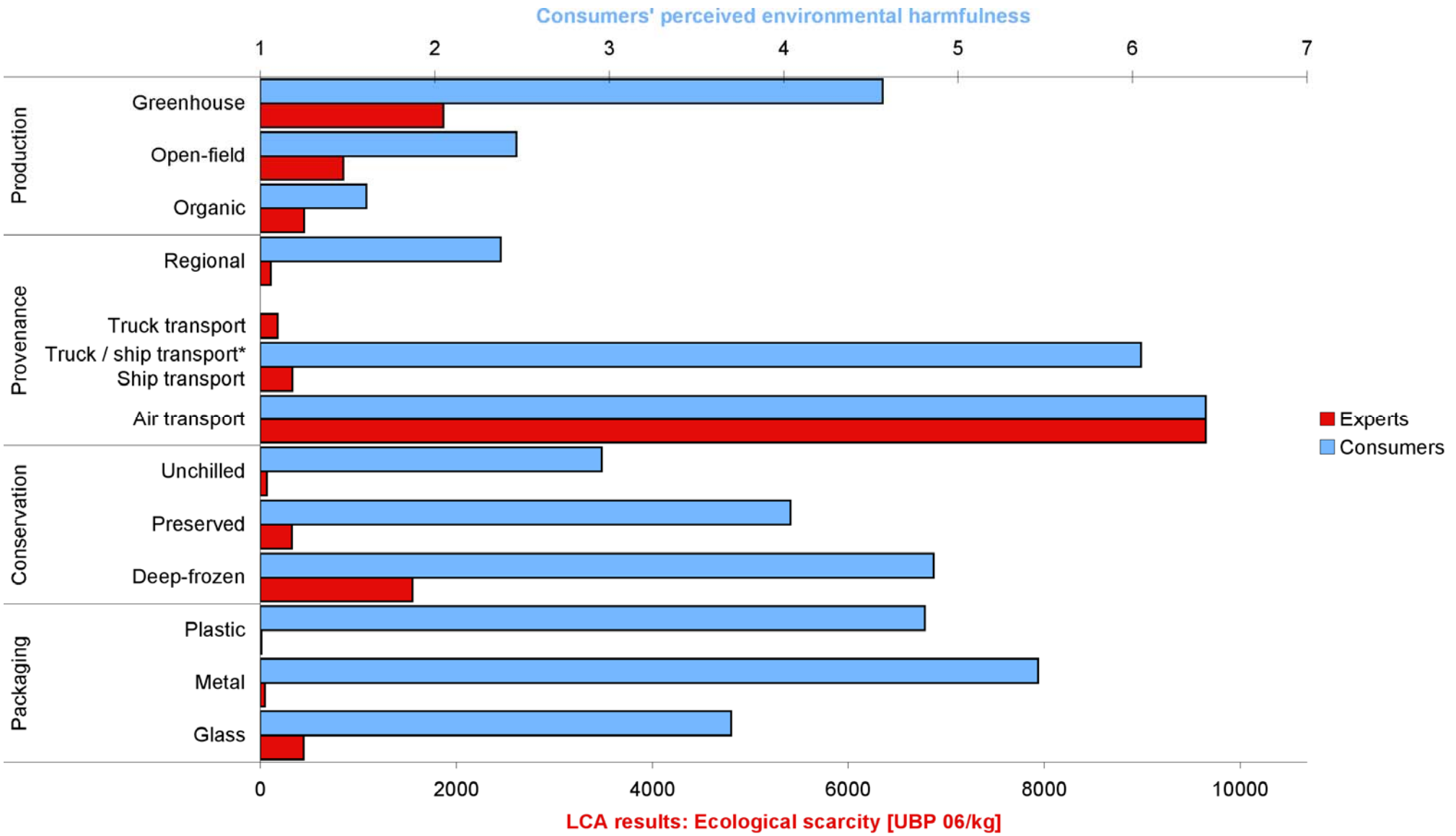
(see Grunert, 2002)

Consumers‘ environmental assessment

- Computer-based questionnaire
  - Rating of different environmental criteria
  - Choicetask

- 79 participants, living in Zurich or its agglomeration
  - 55 females (70%) and 24 males (30%)
  - Mean age: 48.84 years (*SD* = 16.10)

Tobler, Visschers, & Siegrist, accepted for publication



*While experts rated truck and ship transportation separately, consumers evaluated “truck or ship transportation” together.

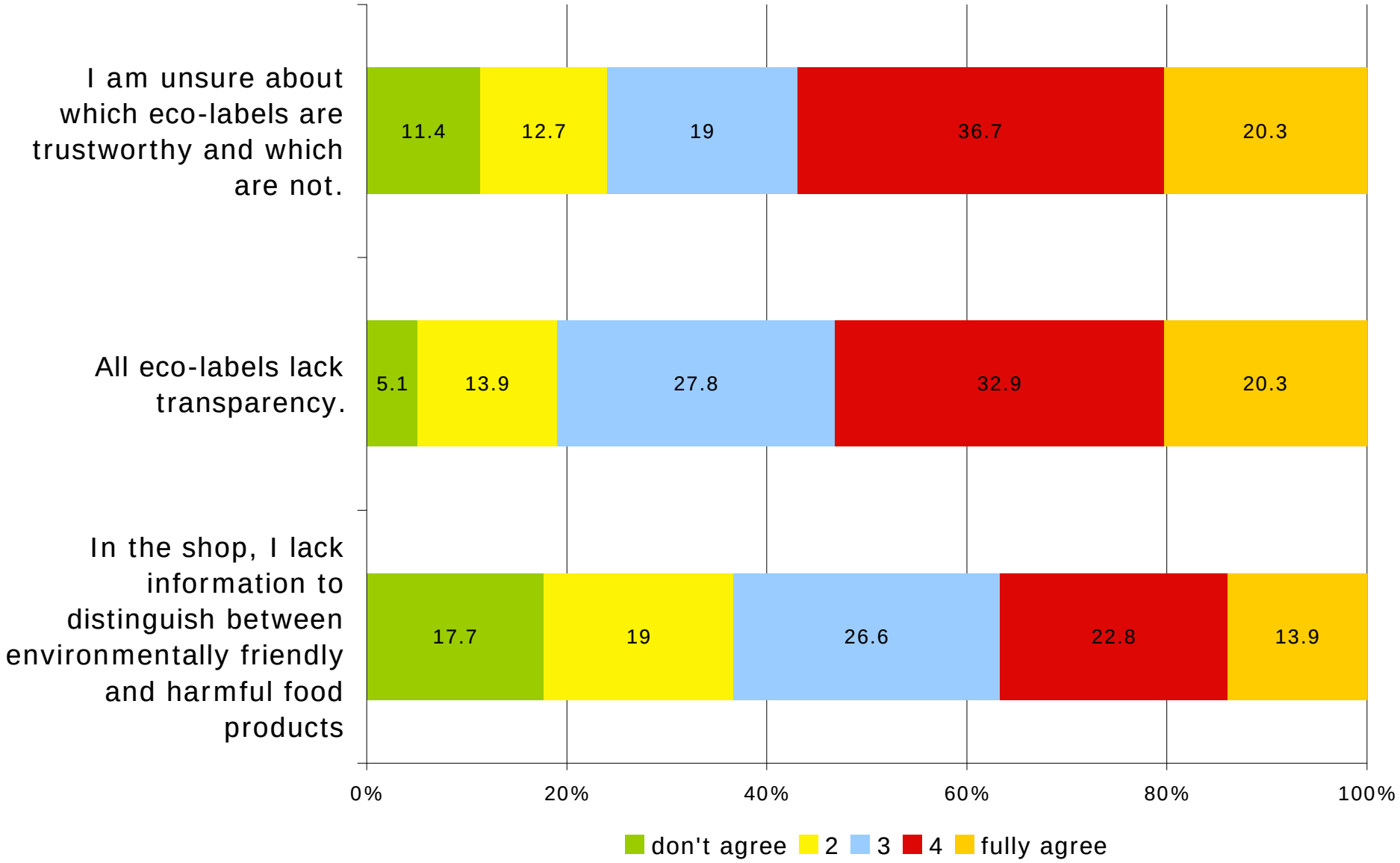
(LCA data calculated by Niels Jungbluth, esu-services)

What would you choose?

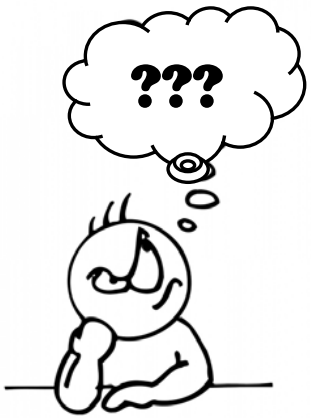
Beans from Egypt, open-field production

Beans, canned

(LCA data calculated by Niels Jungbluth, esu-services)


I am unsure about which eco-labels are trustworthy and which are not.
11.4
12.7
19
36.7
20.3
All eco-labels lack transparency.
5.1
13.9
27.8
32.9
20.3
In the shop, I lack information to distinguish between environmentally friendly and harmful food products
17.7
19
26.6
22.8
13.9
0%
20%
40%
60%
80%
100%
don't agree
2
3
4
fully agree

Evaluability



1‘780 UBP 06/kg

10‘847 UBP 06/kg

(LCA data calculated by Niels Jungbluth, esu-services)

Evaluability principle

Table 2
Attributes of two dictionaries in Hsee's study

	Year of publication	Number of entries	Any defects?
Dictionary A	1993	10,000	No, it's like new
Dictionary B	1993	20,000	Yes, the cover is torn; otherwise it's like new

Source: Adapted from Hsee (1998).

- Preference reversals occur between joint and separate evaluations when a particular attribute is easily evaluated while another is relatively hard to evaluate
- ➔ even very important attributes may not be used unless they can be translated precisely into a frame of reference.

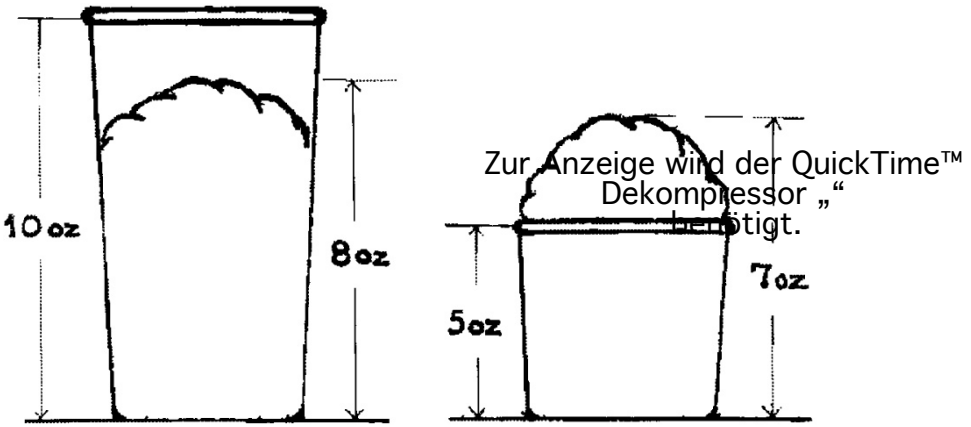


Exhibit 1. Drawings in Study 2

Exhibit 2. WTP prices for Vendor H's and Vendor L's servings in Study 2

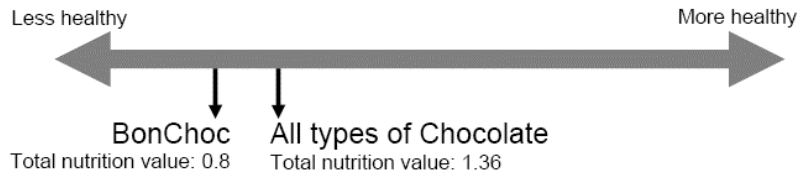
Evaluation mode	Vendor H's	Vendor L's	*t*-value
Separate evaluation	$1.66	$2.26	$2.47, p < 0.05$
Joint evaluation	$1.85	$1.56	$4.31, p < 0.01$

Hsee, 1998

Nutrition information BonChoc

	100 g contain ca.	1 bar (= 29 g) contains ca.
Energy	2284 kJ / 546 kcal	662 kJ / 158 kcal
Fat	32 g	9.3 g
Saturated fat	19 g	5.5 g
Carbohydrates	60 g	17.4 g
Sugar	55 g	15.9 g
Fibre	2 g	0.6 g
Sodium	0.63 g	0.18 g
Protein	6 g	1.7 g

BonChoc compared to all types of chocolate:



Nutrition information BonChoc

	100 g contain ca.	1 bar (= 29 g) contains ca.
Energy	2284 kJ / 546 kcal	662 kJ / 158 kcal
Fat	32 g	9.3 g
Saturated fat	19 g	5.5 g
Carbohydrates	60 g	17.4 g
Sugar	55 g	15.9 g
Fibre	2 g	0.6 g
Sodium	0.63 g	0.18 g
Protein	6 g	1.7 g

BonChoc compared to an orange:

- Effect of nutrition tables with reference information on consumers' attractiveness rating and perceived healthiness
  - Chocolate and yogurt

- Nutrition tables with reference information ➔ product's perception more in line with its actual nutritional value
- Under 2 conditions:
  - Only for products that are perceived to be risky (low nutritional value)
  - Only the product's primary association is affected (e.g. chocolate – hedonic value)
- This effect appears to be independent of the type of product.

Visschers & Siegrist, 2009

Environmental Labelling and Cosumer Preference: Negative vs. Positive Labels

- Promotion vs. prevention focus
  - ➔ reach for things that are environmentally good
  - ➔ avoid things that are environmentally bad

- Three-level eco-label (traffic light design)
  - 16 pairs of products (e.g., food, soap, toilet paper, battery, T-shirt, light bulb)
  - Control condition: all products with yellow label
  - Experimental condition: yellow vs. green / yellow vs. red

Zur Anzeige wird der QuickTime™ Dekompressor „“ benötigt.

Zur Anzeige wird der QuickTime™ Dekompressor „“ benötigt.

- Strong environmental concern: equally affected by positive & negative label
- Intermediate environmental concern : more affected by negative label
- Weak/no environmental concern : unaffected

Grankvist, Dahlstrand & Biel, 2004

Conclusions:

- Consumers need more information on ecological consumption, preferably with a reference frame
- Simple communication tool (e.g. traffic light system) could foster ecological consumption, however, credibility is essential
- Negative labels could additionally influence consumers with intermediate environmental concern

➔ such a system would require a meaningful tool and would have to be implemented by legislation

Thank you for your attention!

Literature

- Grunert, K. G. (2002). Current issues in the understanding of consumer food choice. *Trends in Food Science & Technology*, *13*(8), 275-285.
- Grankvist, G., Dahlstrand, U., & Biel, A. (2004). The impact of environmental labelling on consumer preference: Negative vs. positive labels. *Journal of Consumer Policy*, *27*(2), 213-230.
- Hsee, C.K., 1996. The evaluability hypothesis: An explanation for preference reversals between joint and separate evaluations of alternatives. *Organizational Behavior and Human Decision Processes*, *67*, 242–257.
- Hsee, C.K., 1998. Less is better; When low-value options are valued more highly than high-value options. *Journal of Behavioral Decision Making*, *11*, 107–121.
- Visschers, V.H.M & Siegrist, M., 2009. Applying the evaluability principle to nutrition table information. How reference information changes people‘s perception of food products. *Appetite*, *52*, 505-512.