VU Research Portal

Food and value motivation: Linking consumer affinities to different types of food products

de Boer, J.; Schosler, H.

published in

Appetite

2016

DOI (link to publisher)

[10.1016/j.appet.2016.03.028](https://doi.org/10.1016/j.appet.2016.03.028)

document version

Peer reviewed version

[Link to publication in VU Research Portal](#)

citation for published version (APA)

de Boer, J., & Schosler, H. (2016). Food and value motivation: Linking consumer affinities to different types of food products. *Appetite*, 103, 95-104. <https://doi.org/10.1016/j.appet.2016.03.028>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

This is a postprint of

Food and value motivation: Linking consumer affinities to different types of food products

Boer, J. de, Schosler, H.

Appetite

Published version: <http://dx.doi.org/10.1016/j.appet.2016.03.028>

Link VU-DARE: <http://hdl.handle.net/1871/54309>

(Article begins on next page)

2
3 Food and value motivation: Linking consumer affinities to
4 different types of food products

5
6
7 Joop de Boer^{*1)}

8 Hanna Schösler²⁾

9
10 ¹⁾ Institute for Environmental Studies, VU University, Amsterdam, the Netherlands

11 ²⁾ University of Bayreuth, Bayreuth, Germany

12
13
14 * Address for correspondence:

15 Joop de Boer

16 Institute for Environmental Studies,

17 VU University

18 De Boelelaan 1087

19 1081 HV Amsterdam

20 The Netherlands

21 E-mail: joop.de.boer @vu.nl

22 Fax: +31 20 5989553

23 Phone: +31 20 5989555

24
To cite this article:

de Boer, J. & Schösler, H. (2016), Food and value motivation: Linking consumer
affinities to different types of food products, Appetite,

doi: 10.1016/j.appet.2016.03.028

To link to this article:

<http://dx.doi.org/10.1016/j.appet.2016.03.028>

27

28 Abstract

29 This study uses the consumer affinity concept to examine the multiple motives that
30 may shape consumers' relationships with food. The concept was applied in a study on
31 four broad product types in the Netherlands, which cover a wide range of the market
32 and may each appeal to consumers with different affinities towards foods. These
33 product types may be denoted as 'conventional', 'efficient', 'gourmet' and 'pure'. A
34 comparative analysis, based on Higgins' Regulatory Focus Theory, was performed to
35 examine whether food-related value motivations could explain different consumer
36 affinities for these product types. The affinities of consumers were measured by
37 means of a non-verbal, visual presentation of four samples of food products in a
38 nationwide survey ($n = 742$) among consumers who were all involved in food
39 purchasing and/or cooking. The affinities found could be predicted fairly well from a
40 number of self-descriptions relating to food and eating, which expressed different
41 combinations of type of value motivation and involvement with food. The analysis
42 demonstrated the contrasting role of high and low involvement as well as the potential
43 complementarity of promotion- and prevention-focused value motivation. It is
44 suggested that knowledge of the relationships between product types, consumer
45 affinities and value motivation can help improve the effectiveness of interventions
46 that seek to promote healthy and sustainable diets in developed countries.

47

48 Keywords

49 Consumers; value; motivation; affinity; food products

50

51 Highlights

52 A comparative analysis examined consumer affinities for particular types of foods.

53 These may be denoted as conventional, efficient, gourmet and pure products.

54 Differences in the affinities could be predicted by food-related value motivation.

55 Key was consumers' degree of care about the quality of their food-related judgments.

56 Food affinities are a valuable concept for designing consumer interventions.

57

58 Introduction

59 Understanding the forces that can bring consumers and food products together is key
 60 to improving healthy eating and promoting “fair, culturally-appropriate, biodiversity-
 61 based, sustainable diets” (Lairon, 2012; p. 35). The achievement of these objectives
 62 requires an ethical transformation of consumer behavior and a cultural transformation
 63 of products and markets (Holt, 2012; Lang, 2010; 2012). However, as Scholliers
 64 (2007, p. 337) notes, consumers do not just experience market influences: they co-
 65 create them by their expectations, language and expenditures. Therefore, an important
 66 strategic question in this context is whether and how the transformations can be linked
 67 to consumers’ food-related *value motivation*, i.e. motivation to have desired results
 68 (Higgins, 2012). When dealing with this question, researchers should avoid being
 69 either too abstract in terms of values or too specific in terms of product likings. The
 70 present paper puts forward the view that the analysis of broad affinities may be a
 71 promising intermediate strategy. An *affinity* is a favorable and primarily affectively
 72 based attitude toward someone or something, such as food that has been produced in a
 73 special way or in a particular country, which can affect buying decisions directly and
 74 independent of product judgments (Oberecker, Riefler, & Diamantopoulos, 2008).
 75 The affinity construct may be one of the factors to explain the coincidence of pairs of
 76 items in a market basket (Russell & Petersen, 2000). In particular, a comparative
 77 analysis of different affinities can give highly relevant information on the forces that
 78 shape consumer choices. These forces may be understood metaphorically as a kind of
 79 reciprocal affinity (see Jost, Federico, & Napier, 2009), i.e. consumers can be said to
 80 choose particular types of products, but there is also a sense in which products
 81 ‘choose’ consumers, for instance, via shops they visit and the displays they look at. In
 82 the present paper, we examined differences in affinities for four broad types of
 83 products, which cover a wide range of the market in the Netherlands and may be
 84 denoted as ‘conventional’, ‘efficient’, ‘gourmet’ and ‘pure’. The aim to compare
 85 affinities for these types of foods was suggested by an earlier study (de Boer,
 86 Hoogland, & Boersema, 2007), which identified four main ways of relating to food,
 87 based on combinations of different levels of involvement with food and the two types
 88 of value motivation (i.e. prevention and promotion) from Higgins’ Regulatory Focus
 89 Theory (RFT, see Higgins, 1997; 2012). The current paper describes a consumer
 90 survey that measured differences in affinities by means of non-verbal, visual

91 presentations of four samples of food products and tested whether the differences
92 could be predicted by combinations of involvement and type of value motivation,
93 after controlling for demographic variables.
94
95 Cooking and eating are forms of goal-directed behavior with many complementary
96 and competing motivational aspects, such as the need to strive for variation, to make
97 balanced choices, to avoid ‘bad’ food, and to preserve favored combinations of use
98 situations, meals, products and ingredients (e.g. Fischler, 1980; Rozin, 1976;
99 Scholliers, 2007). These aspects can be translated in the language of short self-
100 descriptions, which may help consumers recognize how they relate to food (e.g. “I am
101 curious about new tastes”). Although the self-descriptions can be analyzed in several
102 ways, it is important to assess their consistency with some theoretical principle, as
103 self-reports are themselves behaviors that require dynamic interpretation (Ryan &
104 Deci, 2000). De Boer and colleagues (2007) developed a number of self-descriptions
105 relating to food and eating in order to assess how they can be arranged in a structure
106 of underlying complementary and competing motivations, which revolve around two
107 axes: level of involvement with food and type of value motivation (i.e. promotion- or
108 prevention-oriented). The concept of *involvement* refers to the differences between
109 consumers in terms of how important food and eating are in an individual’s life
110 (Marshall & Bell, 2004; Ohly et al., 2013; Verbeke & Vackier, 2004). Value
111 motivation can be divided into ensuring better results from actions (with a promotion
112 focus) and ensuring against worse results from actions (with a prevention focus)
113 (Higgins, 1997; 2002; 2012). *Promotion-focused motivation* is basically concerned
114 with obtaining nurturance (e.g. ‘good’ food); it underlies concerns with the
115 pleasurable presence of positive outcomes, including accomplishments, aspirations
116 and ideals. In contrast, *prevention-focused motivation* is concerned with obtaining
117 security and avoiding negative outcomes (e.g. ‘bad’ food); it underlies concerns with
118 safety and fulfillment of responsibilities. An individual’s momentary focus on
119 promotion or prevention will depend on his or her personal history and circumstances
120 induced by the situation at hand. Hence, the distinction between promotion and
121 prevention gives a broader theoretical interpretation to the omnivore’s paradox
122 between novelty and tradition (Fischler, 1980; Rozin, 1976; Scholliers, 2007).

123

124 In a nationwide survey among consumers in the Netherlands, de Boer and colleagues
 125 (2007) found four main ways of relating to food. The set of self-descriptions could be
 126 classified in terms of involvement with food and type of value motivation, and the
 127 underlying structure could be validated by showing that the self-descriptions were
 128 differentially correlated with the values of Schwartz' value model (see Schwartz et al.,
 129 2001). The latter approach was chosen, because there is no generally accepted
 130 standard measurement tool to assess all the aspects of regulatory focus (Haws,
 131 Dholakia, & Bearden, 2010). Importantly, the results were also in line with the
 132 literature on specific motivational aspects of food. The big picture is that valuing a
 133 varied and adventurous taste (e.g. Ullrich, Touger-Decker, O'Sullivan-Maillet, &
 134 Tepper, 2004; Wycherley, McCarthy, & Cowan, 2008) can be categorized as
 135 *promotion-oriented and highly involved*, whereas being easy about food (e.g.
 136 Buckley, Cowan, & McCarthy, 2007; Candel, 2001) can be termed as *promotion-*
 137 *oriented and lowly involved*. Also, giving reflective attention to the wider implications
 138 of food choices in terms of health, naturalness of the food, weight control and ethical
 139 considerations (e.g. Pollard, Steptoe, & Wardle, 1998; Schifferstein & Oude
 140 Kamphuis, 1998; Torjusen, Lieblein, Wandel, & Francis, 2001) can be classified as
 141 *prevention-oriented and highly involved*, whereas preferences for a familiar meal (e.g.
 142 Kitsawad & Guinard, 2014; Pula, Parks, & Ross, 2014) can be labelled as *prevention-*
 143 *oriented and lowly involved*. Hence, although these four ways of relating to food
 144 should not be seen as fixed, culturally invariant categories, they may be very suitable
 145 for a comparative analysis of affinities.

146
 147 The link between affinities and value motivation is based on the experiences that
 148 underlie an individual's evaluative sensitivity to a particular type of products.
 149 Analysis of motivational differences in relation with consumption patterns has led to
 150 interesting insights into how consumers can learn to associate different products with
 151 either promotion or prevention (Higgins, 2002; Zhou & Pham, 2004). Higgins' theory
 152 specifies that consumers get the experience of 'feeling right' about what they are
 153 doing if there is a psychological 'fit' between their goal orientation (promotion or
 154 prevention), their strategy to reach the goal (eager approach or vigilant avoidance),
 155 and goal-relevant attributes of the choice options (e.g. promotion-related or
 156 prevention-related product benefits). As consumers tend to be most attentive to

product information that is fitting with their predominant goal orientation, they may learn to prefer either products with a promotion benefit or the ones with a prevention benefit and apply their choice strategy over and over again, rather than reconsider it on every occasion (Zhou & Pham, 2004). This may result in an increased affinity for particular products. In terms of product properties, for example, luxury and technological innovation may appeal to promotion-oriented consumers, whereas safety and reliability may appeal to prevention-oriented ones (e.g. Chernev, 2004; Higgins, 2002).

It should be noted, however, that the relationship between promotion and prevention is not a simple one; Higgins (2012; p. 412) suggests, for example, that good cooking may involve both promotion and prevention aspects working together. As the two aspects are conceived as distinct but not bipolar constructs, individuals and situations can be either relatively high in both promotion and prevention focus concerns or they can be relatively low in both. Another point is that the role of promotion and prevention focus depends on the individual's level of involvement in the activity (Avnet, Laufer, & Higgins, 2013; Wang & Lee, 2006). The notion that promotion and prevention aspects may work together is relatively new (Bohns et al., 2013; Higgins, 2012). The notion implies that it may be advantageous or even necessary for an individual to switch between regulatory strategies (approach or avoidance) and to focus on other aspects of an issue that require attention. There is growing evidence that such a switch is more likely under conditions of high involvement (Wang & Lee, 2006; see also Avnet et al., 2013). In this way, promotion and prevention aspects may become complementary, which can make them both more accessible for highly involved individuals (Higgins, 2012).

These complexities suggest that a comparative analysis of more than two product types is needed to assess their relative appeal to promotion- and prevention-focused individuals. Building on the work by de Boer and colleagues (2007), the present study examined how the set of self-descriptions can help to predict differences in consumer affinities evoked by four broad types of products, often sold by different outlets. Theoretically, it may be expected that consumers with an affinity for food items purchased in a *gourmet* specialty shop will have a promotion focus and a high level of

190 involvement (e.g. valuing a varied and adventurous taste). Those with an affinity for
 191 *efficient* foods, sold in convenience packaging, may also have a promotion focus but a
 192 low level of involvement (e.g. being easy about food). Consumers with an affinity for
 193 *pure* ingredients, sold at a natural food shop, may have a prevention focus and a high
 194 level of involvement (e.g. giving reflective attention to the wider implications of food
 195 choices). Those with an affinity for products from a *conventional* supermarket may
 196 also have a prevention focus but a low level of involvement (e.g. preferring a familiar
 197 meal). These affinities have been studied in previous work as separate market
 198 segments, such as segments with a preference for convenience foods (Brunner, van
 199 der Horst, & Siegrist, 2010; Buckley et al., 2007), specialty foods (Huddleston,
 200 Whipple, Mattick, & Lee, 2009; Wycherley et al., 2008), or, in particular, organic
 201 foods (Baker, Thompson, & Engelken, 2004; Bezawada & Pauwels, 2013; Hughner,
 202 McDonagh, Prothero, Shultz, & Stanton, 2007; Padilla Bravo, Cordts, Schulze, &
 203 Spiller, 2013). These studies show that each of the segments may be described in
 204 terms of socio-demographic characteristics (i.e. age, gender, level of education,
 205 income, and household size) and particular motives that provide pragmatic (real-
 206 world) descriptions of consumers (e.g. ‘the adventurous’). However, these studies are
 207 not based on a theoretical and comparative analysis of motivation that can give
 208 insights into the complementary or competing roles of motives for how consumers
 209 relate to their food.

210
 211 A challenge in predicting affinities for types of foods is to ensure that the descriptions
 212 of the product attributes do not overlap with the self-descriptions, as this would be a
 213 source of common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). One
 214 way to avoid this problem is to take advantage of the importance of visual cues for
 215 food selection (Sengupta & Zhou, 2007; Simmons, Martin, & Barsalou, 2005) by
 216 asking consumers to choose between pictures without descriptive text, showing
 217 samples of food items or food retail outlets. It is well known that pictures are attention
 218 getting devices and that they can lead to greater information processing than would
 219 occur otherwise (Finn, 1988). As the study was meant to highlight the impacts of
 220 motivational factors, it was decided to neutralize the potential role of economic
 221 factors by asking the participants about their affinity without referring to their
 222 willingness to pay. The questionnaire used was adapted to the situation in the

Netherlands and the pictures of food items and food retail outlets were meant to be easily recognizable by Dutch consumers. An additional advantage of the non-verbal approach is that it may reveal differences in affinity for types of foods between migrants and natives, which is relevant for the generalizability of the results. As noted by van Otterloo (2000), the Dutch have never succeeded in being proud of their cuisine. This means that their food choices, on average, tend to favor the status quo and not to overemphasize the importance of food. Another relevant characteristic is that food-related gender differences are much smaller in the Netherlands than in traditional societies (Schösler, de Boer, Boersema, & Aiking, 2015).

In sum, this research went beyond existing work in several ways. Most importantly, it compared differences in consumer affinities evoked by four broad types of products whereas existing work focuses on specific types of food products or ideas. In recent years, RFT has increasingly been applied to study food-related messages and choices, such as the responses of students to messages promoting fruit and vegetable consumption (Spiegel, Grant-Pillow, & Higgins, 2004), the choice behavior of impulsive eaters (Sengupta & Zhou, 2007), consumers' choices for responsible meat (de Boer et al., 2007) and intentions to adopt omega-3 enriched products (Tudoran, Scholderer, & Brunsø, 2012). However, several authors note that there is a basic lack of understanding of how regulatory focus relates to food choices (Pula et al., 2014). Revealing the relationships between food involvement, type of value motivation and broad affinities may be particularly helpful in this context.

Our approach involved three complementary analyses. First, a multidimensional scale analysis was carried out to verify with new data how well the set of self-descriptions relating to food and eating represented the underlying conceptual structure. Second, the relationships were examined between the differences in consumer affinities for the types of foods and a set of preferences for food retail outlets, which were meant to cover a broad range of the market. Third, a multinomial logistic regression was used to identify the extent to which the self-descriptions predicted the differences in consumer affinities, controlling for the demographic variables age, gender, level of education, income, and household size. In order to explore how the self-descriptions might complement or counteract each other, they were treated as separate predictors.

257 Method

258 Sample, participants and procedure

259 Embedded in a nationwide survey among consumers with Internet access (about 93%
 260 of the population in the Netherlands), two sets of photos were used to measure
 261 affinities for types of food products and preferences for food retail outlets, in addition
 262 to questions that covered various aspects of food consumption. In November 2010, a
 263 representative sample was drawn from a large panel of persons who are willing to
 264 participate in web-based research for a small reward, which they can keep for
 265 themselves or donate to charity ($n = 1083$, response rate in two weeks 68%). The
 266 questionnaire included modules with items on food purchasing and cooking, self-
 267 descriptions relating to food and eating, meal preferences and the main demographics.
 268 The module on meal preferences referred to meat and meat alternatives and was
 269 described in a separate paper (Schösler, de Boer, & Boersema, 2012). Another, brief,
 270 communication focused on the consumption of snacks (de Boer, Schösler, &
 271 Boersema, 2013). For the present analysis of affinities for types of foods, only those
 272 participants were studied who were involved in food purchasing and/or cooking ($n =$
 273 742). Their main demographics are presented below.

274

275 Measures and analyses

276 Self-descriptions relating to food and eating

277 The set of self-descriptions relating to food and eating (also called the Food
 278 Involvement and Focus Questionnaire, FIFQ) was developed by de Boer et al. (2007),
 279 drawing on an approach adapted from Schwartz et al. (2001). The items were written
 280 in terms of short, positively worded portraits of persons who show different degrees
 281 of involvement in food, both in promotion-oriented and prevention-oriented ways (see
 282 Table 2). The female version of a highly involved promotion-oriented item is: "She
 283 feels proud of her taste. She believes that her food choices are very attractive." The
 284 lowly involved alternative is being easy about food. An example of a highly involved
 285 prevention-oriented item is: "She is very mindful of food. She wants to eat sensibly."
 286 In this case, the lowly involved alternative is a preference for ordinary meals.
 287 Participants were asked to compare the portrait to themselves and to rate on a 7-point
 288 scale "how much like you" the person is. Following Schwartz et al. (2001), the
 289 answers were centered to correct for individual differences in average rating levels.

290 All the 11 items from the original set and one new item were used in the analysis. The
 291 new item (“She likes many different foods. She is also a great taster”) was meant to
 292 better represent the adventurous taster.

293

294 Affinities for types of foods

295 The participants were asked about their affinity using a set of four photos, each taken
 296 from a different set of real food products (Figure 1). The four photos were meant to
 297 represent a more-or-less complete range of the main product types, sold by different
 298 types of retailers. The choice of the products was informed by personal interviews by
 299 one of the authors with consumers from each supposed type, partly published in a
 300 separate paper (Schösler, de Boer, & Boersema, 2013). Notably, it was not necessary
 301 that the pictures perfectly mirrored particular market segments, but only that there
 302 was enough diversity to reveal different affinities. Also the pictures were not meant to
 303 emphasize differences in healthy or sustainable choices. Picture 1 stood for
 304 conventional food choices in the Netherlands. The items included potatoes, broccoli,
 305 leak and minced meat, as well as white bread and an instant meat sauce. Picture 2
 306 stood for the importance of quick and efficient meals. The items included
 307 convenience foods in convenience packaging, such as instant vegetables, instant meat
 308 replacers and crisps. Picture 3 was meant to reflect a gourmet orientation. It showed,
 309 for example, fresh fish, fresh vegetables, luxurious chocolate and coffee products and
 310 a baguette. Picture 4 stood for the assortment of natural food shops. It displayed pure
 311 ingredients, beans, rice wafers, nuts and pumpkin and brown bread. After showing the
 312 participants the set of four pictures, their food type affinity was measured by asking
 313 them to indicate which picture would fit best with them.

314

315 FIGURE 1

316

317 As a rough check on the differences between consumer affinities, the participants
 318 were also shown a number of photos of food retail outlets, again without verbal
 319 information (Figure 2). In this case they were asked to select up to two preferred
 320 outlets. The seven photos were meant to represent a more-or-less complete range of
 321 the main outlet types. Picture A showed a regular Dutch supermarket that may
 322 particularly appeal to convenience-oriented customers. Fresh products are often sold

packaged and ready to use. Picture B indicated a small natural foods shop that consumers may associate with organic and bio-dynamic products, as well as special gourmet items that are hard to find in regular supermarkets. Picture C was taken from an outdoor market that emphasizes fresh produce and unprocessed foods. Picture D exposed a typical ethnic market that again offers fresh produce as well as more exotic foods. These shops usually contain a meat counter that sells fresh meat cuts, especially suitable for ethnic cooking or for the gourmet who prefers to cook from scratch. Picture E depicted a typical discount supermarket that will give less aesthetic attention to food. There is usually an emphasis on conventional foods and bulk sales, fresh produce is displayed less frequently. Picture F showed a take-away ('traiteur') that will sell ready-made meals within a higher market segment. Thus, there is a focus on gourmet, but there is also an element of efficiency involved for the customers with an adventurous taste but little time or involvement to prepare food themselves. Picture G depicted a typical smaller neighborhood supermarket that will mainly cater to a more conventional as well as a more convenience seeking customer.

FIGURE 2

Background variables

The main background variables were gender, age, level of education, household size and migration status. The distinction between natives and migrants was based on a question on country of birth. A question on household income produced a high number of missing values (27%) and was left out of the multivariate analyses.

Analyses

All analyses were conducted with SPSS 21 for Windows. The structure of relations among the self-descriptions was examined through multidimensional scaling using PROXSCAL. This method was applied with interval proximity transformations, Euclidian distance measures, and Z-score transformations of the ratings. Univariate and multinomial logistic regression analyses were used to test the differences between the chosen types of foods for the predictor variables. One-way ANOVAs with Bonferroni's post-hoc test ($p < .05$) were used for interval data, chi square for

355 categorical data. For those variables having a significant univariate association,
356 multinomial logistic regression was used to compare prediction models.
357

358 Results

359 The participants who were active in purchasing and/or cooking were more often
 360 women (66%) than men (34%). This can be attributed to different gender roles in the
 361 households, although gender differences in the Netherlands tend to be much smaller
 362 than those in traditional societies. As shown by Table 1, there were large differences
 363 in demographics between the active and the non-active women, but less so between
 364 active and non-active men. The small group of non-active women was relatively
 365 young and belonged to larger households. The non-active men also belonged to larger
 366 households and had more often a low level of education. That is, the food-related
 367 activities of women and men differed less from each other as their level of education
 368 increased. Hence, the differences between the active and non-active participants were
 369 an effect of prevailing gender roles and household size.

370

371 TABLE 1

372

373 The first analysis was carried out to verify how well the set of self-descriptions
 374 represented the underlying conceptual structure. The positions of the self-descriptions
 375 (FIFQ items) in the two dimensional structure of involvement and type of value
 376 motivation are described in Table 2 and visualized in Figure 3. Table 2 describes the
 377 mean ratings and standard deviations of the items and it presents the spatial
 378 coordinates of the MDS solution [model = interval, normalized raw Stress = .019
 379 (two-dimensional solution) versus .101 (one-dimensional)], plotted in Figure 2. For
 380 reasons of presentation, the coordinates were mirrored on both axes. The horizontal
 381 dimension discriminated the self-descriptions in terms of level of involvement. Low
 382 involvement meant that meals were not considered important; high involvement was,
 383 for instance, expressed by a preference to vary one's meal. In addition, the vertical
 384 dimension separated the items into, on the one hand, promotion-oriented motivation,
 385 such as enjoying eating well (involvement high) or eating plenty of foods
 386 (involvement low), and, on the other hand, prevention-oriented motivation, such as
 387 showing respect for food (involvement high) or preferring ordinary meals
 388 (involvement low). In sum, the results successfully reproduced the four distinct
 389 regions of items that represent each of the four combinations of involvement and type
 390 of value motivation.

TABLE 2

FIGURE 3

The second set of analyses examined the relationships between the affinities for types of food and the preferences for food retail outlets. The participants had different affinities for the types of food products. A large number (50%) chose the conventional type (picture 1). Picture 3 (gourmet) was chosen by 33%, picture 2 (efficient) by 10% and picture 4 (pure) by 7%. The participants could choose one or two preferred outlets. The results showed that 49% chose picture A (regular supermarket), 32% C (outdoor market), 32% E (discount supermarket), 30% D (ethnic market), 15% G (neighborhood supermarket), 13% B (natural foods shop), and 12% F (take-away 'traiteur'). The preferences for the regular supermarket (A) and the outdoor market (C) were not significantly related to the food type affinities (chi square, p -values $> .05$). There was a tendency ($p < .10$) that those who chose the neighborhood supermarket (G) had more affinity for conventional foods (59%). Four other associations were significant (p -values $< .05$). Those who preferred the discount supermarket (E) had more affinity for conventional foods (71%) but less affinity for gourmet (17%) or pure foods (3%); those who preferred the natural shop (B) had more affinity for gourmet (41%) or pure (26%) foods but less affinity for conventional foods (24%); and those who preferred the take-away 'traiteur' (F) or the ethnic market (D) had more affinity for gourmet foods (49% and 40%, respectively). Affinity for efficient foods (on average 10%) was not related to a preference for one of the outlets. The variance in the food type affinities accounted for by the four predictors was satisfactory (Nagelkerke pseudo $R^2 = .164$). Hence, the affinities for types of food were largely consistent with preferences for outlets, although there was no simple one-to-one relationship.

The relationship between the affinities and the self-descriptions was examined by univariate and multivariate analyses. The univariate analyses showed that each of the self-descriptions was significantly (all p -values $< .05$) associated with the food type affinities. Additionally, the multivariate analysis indicated that the number of self-

descriptions as predictors of the affinities could be reduced from twelve to five without a substantial loss of explained variance (Nagelkerke pseudo R^2 changed from .293 to .269). The results of the latter regression analysis, in which the conventional group was used as the reference category, are summarized in Table 3. Descriptive information on how the standardized predictor variables ($M = 0$, $SD = 1$) differed between the food type affinities is presented in Table 4. The results show that the conventional group had relatively low scores on the items, except for “prefers ordinary meal” ($M = .44$, see the first column of Table 4), which suggests prevention-oriented motivation with a low level of involvement. The most distinguishing features of the efficient group, compared to the conventional group in the regression, were their higher scores on “easy about cooking” and, to a lesser extent, on “mindful of food” (see the first column of Table 3). The mean of “easy about cooking” was .67 in this group, which was the highest of all groups (second column of Table 4) and suggests promotion-oriented motivation with a low level of involvement. The most distinguishing features of the gourmet group, compared to the conventional group, were their higher scores on “likes to vary”, “prefers natural products” and a low score on “prefers ordinary meal” (second column of Table 3). The mean of “likes to vary” was .40, which was relatively high (third column of Table 4), suggesting promotion-oriented motivation with a high level of involvement. The most distinguishing features of the pure foods group, compared to the conventional group, were higher scores on “prefers natural products” and “mindful of food”, and a very low score on “prefers ordinary meal”. The means of “prefers natural products” and “mindful of food” were 1.0 in this group (fourth column of Table 4), suggesting prevention-oriented motivation with a high level of involvement. In sum, the four affinities were significantly and meaningfully associated with one or more self-descriptions from each of the four quadrants in Figure 3.

TABLE 3

TABLE 4

The relationship between the affinities and the background variables was also examined by univariate and multivariate analyses. The univariate analyses showed

that age, level of education, income category, household size and migration status, but not gender, were significantly (all p -values $< .05$) associated with the food type affinities. The association with income category was not very strong (Chi square = 17.7, $n = 538$, $df = 6$, $p < .01$); a higher income was related to a lower affinity for the conventional type and higher affinities for the three other types. The information on the associations with age, level of education, household size and migration status is presented in Table 3 (regression) and Table 4 (standardized means). The means in the conventional group did not differ much from the general means of the variables. The results of the regression showed that young participants had relatively more affinity for efficient foods. Those with a higher level of education had relatively more affinity for efficient, gourmet or pure foods. Participants with larger households had relatively less affinity for gourmet foods. Migrants had relatively more affinity for pure foods and gourmet foods. The four background variables produced a Nagelkerke pseudo R^2 of .177. Table 3 reports the variance in the food type affinities accounted for by the self-descriptions without (model 1) and with the background variables (model 2). Controlling for the background variables did not change the odds ratios of the self-descriptions in any significant way; Nagelkerke pseudo R^2 increased from .269 to .350. Hence, the background variables explained 8% additional variance in the food type affinities.

477 Discussion

478 This study has shown that there are interesting and strategically relevant connections
 479 between types of products (often linked to preferred retail outlets) and consumer
 480 affinities. These connections are based on multiple motivational forces, which means
 481 that the affinities should not be understood as fixed categories. The analysis identified
 482 a set of promotion- and prevention-oriented self-descriptions at high and low levels of
 483 food involvement that helped to explain why certain consumers, after they had been
 484 exposed to a more-or-less complete range of product types, chose a certain type by
 485 preference over others. Each of the affinities was related to at least one of the self-
 486 descriptions in the corresponding quadrant of food involvement and type of value
 487 motivation, after controlling for a number of demographic variables. This result
 488 agrees well with our expectations. Interestingly, moreover, the links between the four
 489 affinities and the four motivational quadrants were not one-to-one, mutually exclusive
 490 correspondences. As food has many aspects, more than one motivational strategy is
 491 required. Affinities for gourmet and efficient foods were related to self-descriptions
 492 that reflected not only a promotion focus but also to a certain extent a prevention
 493 focus. This finding underlines that promotion and prevention are not bipolar. In
 494 contrast, high and low involvement can be understood as each other's opposites; i.e.
 495 the affinities for gourmet and pure foods were related to negative responses to a low
 496 involvement item. Hence, this study adds new knowledge to the existing literature on
 497 product types, consumer affinities and value motivation.

498
 499 The comparative analysis demonstrated the contrasting role of high and low
 500 involvement as well as the potential complementarity of promotion and prevention. A
 501 high level of involvement makes individuals care more about their judgments (e.g.
 502 Avnet et al., 2013). This may contribute to the development of an affinity for gourmet
 503 foods or pure foods as both can give consumers the experience of 'feeling right' about
 504 the quality of their choices. In addition, promotion and prevention may provide
 505 complementary frames. For instance, our results indicate that naturalness and
 506 freshness were important qualities for consumers with an affinity for gourmet foods or
 507 pure foods. Underlying this finding may be the importance of different framings of
 508 the natural freshness of pure foods. The attribute of freshness can be framed in terms
 509 of luxury and delight (promotion of a gain) or a health-related necessity (prevention

510 of a loss), which means that it can facilitate the pursuit of both promotion and
 511 prevention goals.

512

513 Consumers with a low level of involvement will be less focused on the quality of their
 514 judgments and their choices, but more on how they experience the outcomes (Avnet et
 515 al., 2013). A low level of involvement in combination with a promotion focus was
 516 associated with an affinity for efficient products. A possible explanation for this link
 517 is that efficient products tend to be more technologically advanced and easy to use
 518 ('time saving') than conventional products, which may be attractive for individuals
 519 with a promotion-focus (Higgins, 2002; Westjohn, Arnold, Magnusson, Zdravkovic,
 520 & Zhou, 2009). An affinity for conventional products was connected with the
 521 combination of low involvement and a prevention focus. The latter is not surprising,
 522 as individuals with a prevention focus are more committed to maintaining and
 523 preserving the status quo (Chernev, 2004).

524

525 The fact that the conventional products were chosen by half of the participants cannot
 526 be attributed to value motivation only. The results indicate that income and factors
 527 directly related to income, such as a higher level of education and a small household
 528 size, also played a role in the answers. As the latter variables are characteristics of
 529 specialty food buyers (Huddleston et al., 2009; Wycherley et al., 2008), a plausible
 530 explanation of this income-related effect is that the participants took the estimated
 531 price of the products into account when they chose for the conventional type. Their
 532 price sensitivity may also have played a role; the purchase behavior of households is
 533 affected by stable differences in their sensitivity to marketing mix variables (price and
 534 display) across multiple product categories (Ainslie & Rossi, 1998). Other cultural
 535 factors related to education and migration status had an effect too: higher educated
 536 participants and migrants did not appreciate the conventional type of foods very
 537 much, which may be seen as being 'typically Dutch'. In sociological terms, this
 538 difference in appreciation may be interpreted as resulting from both status-oriented
 539 consumption and personal taste experiences (Bourdieu, 1984). A final point to be
 540 noted is that gender did not make a difference here; although there are gender
 541 differences in food-related motivation (Schösler, de Boer, & Boersema, 2014), the

542 lack of difference may be due to the fact that all the participants were involved in food
 543 purchasing and/or cooking.

544

545 Although the results merit further validation, we believe that our analysis has strategic
 546 implications for the two main types of intervention that seek to promote healthy and
 547 sustainable diets in developed countries (Holt, 2012; Lang, 2010). The first type
 548 comprises strategies that aim to achieve an ethical transformation of consumer
 549 behavior. These strategies presuppose that consumers care about the quality of their
 550 judgments, as this can make them sensitive to the issues raised in an ethical appeal
 551 (e.g. in the form of labels or more personal recommendations). A sufficiently high
 552 level of involvement can motivate consumers for a change and keep them motivated
 553 while they are coping with demotivating tensions and contradictions. The participants
 554 with affinities for gourmet foods and pure foods may fit into this category. Moreover,
 555 these consumers may feel that a proposed change is right for an individual with their
 556 identity when they recognize its promotion- or prevention benefits. Although some
 557 studies suggest that it may be easier and more convincing to market sustainable
 558 products with prevention-framed appeals (Bullard & Manchanda, 2013), the potential
 559 contribution that promotion motivation can make should not be neglected. The
 560 relationship between affinities and value motivation can help to understand the full
 561 range of the potential promotion- or prevention benefits of products (or diets), for
 562 instance, in terms of ideals to be achieved or responsibilities to be met. The relatively
 563 small group who had an affinity for pure foods demonstrated that consumers may
 564 seek solutions to food quality concerns through a return to a more 'physical', more
 565 'natural past' in a prevention-focused manner (e.g. de Boer, 2010). The gourmet
 566 group may focus on the promotion benefits of luxury, technological advancement, and
 567 the cultural status associated with this type of food. Current trends among gourmets
 568 seem to highlight authentic qualities as geographic specificity, 'simplicity', personal
 569 connections or historicism (Johnston & Baumann, 2007), which might be combined
 570 meaningfully with ethical improvements (e.g. eating less but higher quality meat).

571

572 As a relatively large group of consumers did not show high levels of care about the
 573 quality of their food choices, attempts to increase consumer awareness of health and
 574 sustainability issues will not be sufficient to change consumer patterns fast enough.

Such a change requires the second type of interventions, aimed at a cultural transformation of products and markets to move unsustainable markets toward more sustainable consumption (Holt, 2012; Lang, 2012). There are two features that especially characterize this type of intervention. First, the role of culture as a broad organizing factor is emphasized. Second, the attention shifts from the focus on one particular (healthy or sustainable) product to a broader focus on types of products. Interesting examples of these notions are attempts to create a new regional (Nordic) diet in accordance with dietary recommendations, e.g. more calories from plant foods and fewer from meat, more foods from the sea and the wild countryside (Mithril et al., 2012; van Dooren, Marinussen, Blonk, Aiking, & Vellinga, 2014). The Nordic diet was meant for the general population, but its acceptance was seriously limited by social and cultural barriers, in particular by a lack of affinity for its practical aspects (e.g. Micheelsen, Havn, Poulsen, Larsen, & Holm, 2014). Hence, it is important to develop a strategic perspective informed by insights into the links between affinity and motivation. A useful strategy is to redevelop and improve each type of products (conventional, efficient, gourmet and pure) so that they become more healthy and sustainable. A crucial advantage of this strategy is that it gives more structure to the problem to be solved allowing for specific measurable goals. In addition, consumers will be able to change the impacts of their food consumption without having to change their affinity. Recently, such an approach has been applied to reformulate ‘junk food’ ready-meals into nutritionally balanced pizzas without requiring change in eating habits (Combet, Jarlot, Aidoo, & Lean, 2014). Generally, the notion of a reciprocal affinity between types of consumers and types of products evokes the responsibility of food manufacturers, producers and retailers to develop sensitive strategies to create healthier and more sustainable food options for all kinds of consumers.

As food products and food concepts seem to be changing continually (Scholliers, 2007), knowledge of the relationships between broad types of products, consumer affinities and value motivation is of great importance. The hypothesized reciprocal influences between product types and consumer affinities offer promising opportunities for further research. One of the limitations of the current study is that the four types of food were not exhaustive. The picture of efficient foods, for instance,

608 was meant to stand for the consumption of quick and efficient meals, but it did not
 609 contain any reference to the more specific categories of ‘fast food’, ‘take-away food’
 610 or ‘ready-to-heat meals’. The literature suggests that these various combinations of
 611 food, convenience and time-saving tend to appeal to consumers who have some
 612 characteristics in common, such as being young, but who are influenced by different
 613 motives and values (Botonaki & Mattas, 2010; Olsen, Menichelli, Sørheim, & Næs,
 614 2012; van der Horst, Brunner, & Siegrist, 2011). Similar complexities have been
 615 observed with respect to gourmet foods, which can more specifically be characterized
 616 as ‘authentic’ or ‘exotic’ (Johnston & Baumann, 2007). Our picture of pure foods
 617 showed natural products, a category that is more difficult to define and to identify
 618 than eco-labelled products (Amos, Pentina, Hawkins, & Davis, 2014). It should also
 619 be noted that the pictures of gourmet foods and pure foods displayed some items that
 620 were unpackaged. This may have had a special meaning for consumers, as the
 621 absence of packaging may provide a more ‘authentic’ or ‘pure’ image. The role of
 622 packaging, however, is currently confusing and consumers may believe it is more
 623 hygienic to buy their food packaged. This type of beliefs on product attributes may
 624 need further attention. The self-descriptions relating to food and eating (FIFQ items)
 625 also offer promising opportunities for further research. This includes the format of the
 626 items, which was adapted from the Portrait Value Questionnaire (PVQ), developed by
 627 Schwartz et al. (2001). Each portrait was based on two sentences, but it might be
 628 better to use a single sentence, as Schwartz et al. (2012) have done in the new version
 629 of the PVQ. This approach may also help in creating varied self-descriptions to learn
 630 more about each of the four quadrants of involvement and value motivation.

631
 632 More generally, it is vital to consider whether and how consumers with different value
 633 motivations are able to adapt their choices to the constraints of day-to-day living. That
 634 is, how they bridge the gap in abstraction between their notion of food and concrete
 635 and detailed features of a meal, such as its size and composition at a particular time of
 636 the day. For example, some preliminary work we have done indicates that individuals
 637 who are promotion-oriented and highly involved (‘gourmets’) may develop skills in
 638 using leftovers to cut preparation time. Such research can be properly informed by in-
 639 depth interviews to analyze the value motivations, beliefs and food practices of
 640 particular individuals in the light of cultural transitions, such as the rise of the organic

641 movement (see for a recent example Schösler et al. (2013)). The connection with
642 cultural transitions may be crucial to see consumers in their role of co-creators of the
643 market (Scholliers, 2007). Future research may examine each of the different ways of
644 relating to food and consider how they can be linked to significant transitions towards
645 more healthy and more sustainable diets.

646
647 In conclusion, the comparative analysis of broad affinities can give important
648 information on differences in value motivation underlying the food preferences of a
649 large population. This can help to understand the differential effectiveness of
650 interventions and the potential promotion- or prevention benefits of products or diets.
651 Strategies that aim to achieve an ethical transformation of consumer behavior
652 presuppose that consumers care about the quality of their judgments. This applies to
653 consumers with affinities for gourmet foods and pure foods who may be sensitive to
654 the issues raised in an ethical appeal, particularly, when they recognize its promotion-
655 or prevention benefits. The relatively large group of consumers who did not show
656 high levels of care about the quality of their food choices, has to be approached in
657 other ways. A useful intervention strategy is to redevelop and improve each type of
658 products (conventional, efficient, gourmet and pure) so that they become more
659 healthy and more sustainable. Interventions that neglect consumer affinities will be
660 hampered by social and cultural barriers.

661

Reference List

- 662
663
664
665 Ainslie, A. & Rossi, P. E. (1998). Similarities in choice behavior across product
666 categories. *Marketing Science*, 17, 91-106.
- 667 Amos, C., Pentina, I., Hawkins, T. G., & Davis, N. (2014). "Natural" labeling and
668 consumers' sentimental pastoral notion. *Journal of Product & Brand*
669 *Management*, 23, 268-281.
- 670 Avnet, T., Laufer, D., & Higgins, E. T. (2013). Are all experiences of fit created
671 equal? Two paths to persuasion. *Journal of Consumer Psychology*, 23, 301-
672 316.
- 673 Baker, S., Thompson, K. E., & Engelken, J. (2004). Mapping the values driving
674 organic food choice: Germany vs the UK. *European Journal of Marketing*, 38,
675 995-1012.
- 676 Bezawada, R. & Pauwels, K. (2013). What is special about marketing organic
677 products? How organic assortment, price, and promotions drive retailer
678 performance. *Journal of Marketing*, 77, 31-51.
- 679 Bohns, V. K., Lucas, G. M., Molden, D. C., Finkel, E. J., Coolsen, M. K., Kumashiro,
680 M. et al. (2013). Opposites fit: Regulatory focus complementarity and
681 relationship well-being. *Social Cognition*, 31, 1-14.
- 682 Botonaki, A. & Mattas, K. (2010). Revealing the values behind convenience food
683 consumption. *Appetite*, 55, 629-638.

- 684 Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste*. (R. Nice,
685 Trans). London: Routledge & Kegan Paul (Original work published in 1979).
- 686 Brunner, T. A., van der Horst, K., & Siegrist, M. (2010). Convenience food products.
687 Drivers for consumption. *Appetite*, 55, 498-506.
- 688 Buckley, M., Cowan, C., & McCarthy, M. (2007). The convenience food market in
689 Great Britain: Convenience food lifestyle (CFL) segments. *Appetite*, 49, 600-
690 617.
- 691 Bullard, O. & Manchanda, R. V. (2013). Do sustainable products make us prevention
692 focused? *Marketing Letters*, 24, 177-189.
- 693 Candel, M. J. J. M. (2001). Consumers' convenience orientation towards meal
694 preparation: Conceptualization and measurement. *Appetite*, 36, 15-28.
- 695 Chernev, A. (2004). Goal orientation and consumer preference for the status quo.
696 *Journal of Consumer Research*, 31, 557-565.
- 697 Chernev, A. (2004). Goal-attribute compatibility in consumer choice. *Journal of*
698 *Consumer Psychology*, 14, 141-150.
- 699 Combet, E., Jarlot, A., Aidoo, K. E., & Lean, M. E. (2014). Development of a
700 nutritionally balanced pizza as a functional meal designed to meet published
701 dietary guidelines. *Public Health Nutrition*, 17, 2577-2586.
- 702 de Boer, J. (2010). The role of prevention-oriented attitudes towards nature in people's
703 judgment of new applications of genomics techniques in soil ecology. *Public*
704 *Understanding of Science*, 19, 654-668.

- 705 de Boer, J., Hoogland, C. T., & Boersema, J. J. (2007). Towards more sustainable
 706 food choices: Value priorities and motivational orientations. *Food Quality and*
 707 *Preference*, 18, 985-996.
- 708 de Boer, J., Schösler, H., & Boersema, J. J. (2013). Motivational differences in food
 709 orientation and the choice of snacks made from lentils, locusts, seaweed or
 710 "hybrid" meat. *Food Quality and Preference*, 28, 32-35.
- 711 Finn, A. (1988). Print ad recognition readership scores: An information processing
 712 perspective. *Journal of Marketing Research*, 25, 168-177.
- 713 Fischler, C. (1980). Food habits, social change and the nature/culture dilemma. *Social*
 714 *Science Information*, 19, 937-953.
- 715 Haws, K. L., Dholakia, U. M., & Bearden, W. O. (2010). An assessment of chronic
 716 regulatory focus measures. *Journal of Marketing Research*, 47, 967-982.
- 717 Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280-
 718 1300.
- 719 Higgins, E. T. (2002). How self-regulation creates distinct values: The case of
 720 promotion and prevention decision making. *Journal of Consumer Psychology*,
 721 12, 177-191.
- 722 Higgins, E. T. (2012). *Beyond pleasure and pain: How motivation works*. New York:
 723 Oxford University Press.
- 724 Holt, D. B. (2012). Constructing sustainable consumption: From ethical values to the
 725 cultural transformation of unsustainable markets. *The Annals of the American*
 726 *Academy of Political and Social Science*, 644, 236-255.

- 727 Huddleston, P., Whipple, J., Mattick, R. N., & Lee, S. J. (2009). Customer satisfaction
728 in food retailing: Comparing specialty and conventional grocery stores.
729 *International Journal of Retail & Distribution Management*, 37, 63-80.
- 730 Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who
731 are organic food consumers? A compilation and review of why people
732 purchase organic food. *Journal of Consumer Behaviour*, 6, 94-110.
- 733 Johnston, J. & Baumann, S. (2007). Democracy versus distinction: A study of
734 omnivorousness in gourmet food writing. *American Journal of Sociology*, 113,
735 165-204.
- 736 Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure,
737 functions, and elective affinities. *Annual Review of Psychology*, 60, 307-337.
- 738 Kitsawad, K. & Guinard, J. X. (2014). Combining means-end chain analysis and the
739 Portrait Value Questionnaire to research the influence of personal values on
740 food choice. *Food Quality and Preference*, 35, 48-58.
- 741 Lairon, D. (2012). Biodiversity and sustainable nutrition with a food-based approach.
742 In B. Burlingame & S. Dernini (Eds.), *Sustainable diets and biodiversity:*
743 *Directions and solutions for policy, research and action* (pp. 30-35). Rome:
744 Food and Agriculture Organization of the United Nations.
- 745 Lang, T. (2010). From 'value-for-money' to 'values-for-money'? Ethical food and
746 policy in Europe. *Environment and Planning A*, 42, 1814-1832.
- 747 Lang, T. (2012). Sustainable diets and biodiversity: The challenge for policy,
748 evidence and behaviour change. In B. Burlingame & S. Dernini (Eds.),

- 749 *Sustainable diets and biodiversity: Directions and solutions for policy,*
 750 *research and action* (pp. 20-26). Rome: Food and Agriculture Organization of
 751 the United Nations.
- 752 Marshall, D. W. & Bell, R. (2004). Relating the food involvement scale to
 753 demographic variables, food choice and other constructs. *Food Quality and*
 754 *Preference*, 15, 871-879.
- 755 Micheelsen, A., Havn, L., Poulsen, S. K., Larsen, T. M., & Holm, L. (2014). The
 756 acceptability of the New Nordic Diet by participants in a controlled six-month
 757 dietary intervention. *Food Quality and Preference*, 36, 20-26.
- 758 Mithril, C., Dragsted, L. O., Meyer, C., Blauert, E., Holt, M. K., & Astrup, A. (2012).
 759 Guidelines for the new Nordic diet. *Public Health Nutrition*, 15, 1941-1947.
- 760 Oberecker, E. M., Riefler, P., & Diamantopoulos, A. (2008). The consumer affinity
 761 construct: Conceptualization, qualitative investigation, and research agenda.
 762 *Journal of International Marketing*, 16, 23-56.
- 763 Ohly, H., Pealing, J., Hayter, A. K., Pettinger, C., Pikhart, H., Watt, R. G. et al.
 764 (2013). Parental food involvement predicts parent and child intakes of fruits
 765 and vegetables. *Appetite*, 69, 14.
- 766 Olsen, N. V., Menichelli, E., Sørheim, O., & Næs, T. (2012). Likelihood of buying
 767 healthy convenience food: An at-home testing procedure for ready-to-heat
 768 meals. *Food Quality and Preference*, 24, 171-178.

- 769 Padilla Bravo, C., Cordts, A., Schulze, B., & Spiller, A. (2013). Assessing
 770 determinants of organic food consumption using data from the German
 771 National Nutrition Survey II. *Food Quality and Preference*, 28, 60-70.
- 772 Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method
 773 bias in social science research and recommendations on how to control it.
 774 *Annual Review of Psychology*, 63, 539-569.
- 775 Pollard, T. M., Steptoe, A., & Wardle, J. (1998). Motives underlying healthy eating:
 776 Using the Food Choice Questionnaire to explain variation in dietary intake.
 777 *Journal of Biosocial Science*, 30, 165-179.
- 778 Pula, K., Parks, C. D., & Ross, C. F. (2014). Regulatory focus and food choice
 779 motives. Prevention orientation associated with mood, convenience, and
 780 familiarity. *Appetite*, 78, 15-22.
- 781 Rozin, P. (1976). The selection of food by rats, humans and other animals. In J.
 782 Rosenblatt, R. A. Hinde, C. Beer, & E. Shaw (Eds.), *Advances in the study of*
 783 *behavior*, Vol. 6 (pp. 21-76). New York, NY: Academic Press.
- 784 Russell, G. J. & Petersen, A. (2000). Analysis of cross category dependence in market
 785 basket selection. *Journal of Retailing*, 76, 367-392.
- 786 Ryan, R. M. & Deci, E. L. (2000). The darker and brighter sides of human existence:
 787 Basic psychological needs as a unifying concept. *Psychological Inquiry*, 11,
 788 319-338.

- 789 Schifferstein, H. N. J. & Oude Kamphuis, P. A. M. (1998). Health-related
 790 determinants of organic food consumption in the Netherlands. *Food Quality*
 791 *and Preference*, 9, 119-133.
- 792 Scholliers, P. (2007). Novelty and tradition. The new landscape for gastronomy. In P.
 793 Freedman (Ed.), *Food. The history of taste* (pp. 332-357). Berkeley, CA:
 794 University of California Press.
- 795 Schösler, H., de Boer, J., & Boersema, J. J. (2012). Can we cut out the meat of the
 796 dish? Constructing consumer-oriented pathways towards meat substitution.
 797 *Appetite*, 58, 39-47.
- 798 Schösler, H., de Boer, J., & Boersema, J. J. (2013). The organic food philosophy. A
 799 qualitative exploration of the practices, values, and beliefs of Dutch organic
 800 consumers within a cultural-historical frame. *Journal of Agricultural and*
 801 *Environmental Ethics*, 26, 439-460.
- 802 Schösler, H., de Boer, J., & Boersema, J. J. (2014). Fostering more sustainable food
 803 choices: Can Self-Determination Theory help? *Food Quality and Preference*,
 804 35, 59-69.
- 805 Schösler, H., de Boer, J., Boersema, J. J., & Aiking, H. (2015). Meat and masculinity
 806 among young Chinese, Turkish and Dutch adults in the Netherlands. *Appetite*,
 807 89, 152-159.
- 808 Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C. et
 809 al. (2012). Refining the theory of basic individual values. *Journal of*
 810 *Personality and Social Psychology*, 103, 663-688.

- 811 Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V.
 812 (2001). Extending the cross-cultural validity of the theory of basic human
 813 values with a different method of measurement. *Journal of Cross-Cultural*
 814 *Psychology*, 32, 519-542.
- 815 Sengupta, J. & Zhou, R. (2007). Understanding impulsive eaters choice behaviors:
 816 The motivational influences of regulatory focus. *Journal of Marketing*
 817 *Research*, 44, 297-308.
- 818 Simmons, W. K., Martin, A., & Barsalou, L. W. (2005). Pictures of appetizing foods
 819 activate gustatory cortices for taste and reward. *Cerebral Cortex*, 15, 1602-
 820 1608.
- 821 Spiegel, S., Grant-Pillow, H., & Higgins, E. T. (2004). How regulatory fit enhances
 822 motivational strength during goal pursuit. *European Journal of Social*
 823 *Psychology*, 34, 39-54.
- 824 Torjusen, H., Lieblein, G., Wandel, M., & Francis, C. A. (2001). Food system
 825 orientation and quality perception among consumers and producers of organic
 826 food in Hedmark County, Norway. *Food Quality and Preference*, 12, 207-216.
- 827 Tudoran, A. A., Scholderer, J., & Brunsø, K. (2012). Regulatory focus, self-efficacy
 828 and outcome expectations as drivers of motivation to consume healthy food
 829 products. *Appetite*, 59, 243-251.
- 830 Ullrich, N. V., Touger-Decker, R., O'Sullivan-Maillet, J., & Tepper, B. J. (2004).
 831 PROP taster status and self-perceived food adventurousness influence food
 832 preferences. *Journal of the American Dietetic Association*, 104, 543-549.

- 833 van der Horst, K., Brunner, T. A., & Siegrist, M. (2011). Fast food and take-away
834 food consumption are associated with different lifestyle characteristics.
835 *Journal of Human Nutrition and Dietetics*, 24, 569-602.
- 836 van Dooren, C., Marinussen, M., Blonk, H., Aiking, H., & Vellinga, P. (2014).
837 Exploring dietary guidelines based on ecological and nutritional values: A
838 comparison of six dietary patterns. *Food Policy*, 44, 36-46.
- 839 van Otterloo, A. H. (2000). The Low Countries. In K. F. Kiple & K. C. Ornelas
840 (Eds.), *The Cambridge world history of food* (pp. 1232-1240). Cambridge:
841 Cambridge University Press.
- 842 Verbeke, W. & Vackier, I. (2004). Profile and effects of consumer involvement in
843 fresh meat. *Meat Science*, 67, 159-168.
- 844 Wang, J. & Lee, A. Y. (2006). The role of regulatory focus in preference construction.
845 *Journal of Marketing Research*, 43, 28-38.
- 846 Westjohn, S. A., Arnold, M. J., Magnusson, P., Zdravkovic, S., & Zhou, J. X. (2009).
847 Technology readiness and usage: A global-identity perspective. *Journal of the*
848 *Academy of Marketing Science*, 37, 250-265.
- 849 Wycherley, A., McCarthy, M., & Cowan, C. (2008). Speciality food orientation of
850 food related lifestyle (FRL) segments in Great Britain. *Food Quality and*
851 *Preference*, 19, 498-510.
- 852 Zhou, R. R. & Pham, M. T. (2004). Promotion and prevention across mental accounts:
853 When financial products dictate consumers' investment goals. *Journal of*
854 *Consumer Research*, 31, 125-135.

855

856

857

858 Table 1859 Demographics of the women and men who were active in purchasing and/or cooking.

	Women		Men	
	Active	Non-active	Active	Non-active
	(n = 488)	(n = 53)	(n = 254)	(n = 288)
	%	%	%	%
<u>Age</u>				
18-34	21 _a	70 _c	11 _b	18 _{a,b}
35-54	45 _a	8 _c	42 _{a,b}	35 _b
55-74	30 _{a,b,c}	19 _b	39 _c	38 _{a,c}
75 and over	4 _a	4 _a	7 _a	8 _a
	(100)	(101)	(99)	(99)
<u>Education</u>				
Primary and lower secondary	35 _{a,b}	32 _{a,b}	30 _b	42 _a
Upper secondary	33 _a	23 _a	31 _a	26 _a
Tertiary	32 _a	45 _a	39 _a	32 _a
	(100)	(100)	(100)	(100)
<u>Household size</u>				
One person	6 _a	2 _{a,b}	9 _a	0 _b
Two persons	44 _a	28 _a	46 _a	45 _a
Three persons	15 _a	15 _a	15 _a	13 _a
Four persons	25 _{a,b}	30 _{a,b}	19 _b	30 _a
Five or more persons	10 _a	25 _b	11 _{a,b}	12 _{a,b}
	(100)	(100)	(100)	(100)

<u>Migration status</u>				
Natives	89 _a	92 _a	90 _a	93 _a
Migrants	11 _a	8 _a	10 _a	7 _a
	(100)	(100)	(100)	(100)

860

861 *Note:* Percentages with the same subscript letter within rows do not differ862 significantly from each other (z-test with Bonferroni correction, $p > .05$).

863

864 Table 2865 Self-descriptions relating to food and eating (FIFO items), female version: mean866 rating, SD, common space coordinates (mirrored on both axes)

Items	M	SD	Common space coordinates	
			Dimension 1	Dimension 2
She is very mindful of food. She wants to eat sensibly.	4.25	1.27	.61	-.44
She feels proud of her taste. She believes that her food choices are very attractive.	4.55	1.23	.60	.14
She likes to vary her meal. She is curious about new tastes.	5.02	1.40	.56	.34
She prefers natural products. She would really like her food fresh from the garden.	4.57	1.44	.47	-.30
She likes many different foods. She is also a great taster.	5.30	1.31	.41	.27
She is grateful for her meal. In her view everything that is edible deserves respect.	4.32	1.34	.29	-.62
She enjoys eating well. In her view every meal should be festive.	4.19	1.35	.26	.53
She is a big eater. She loves to have plenty of palatable foods.	3.55	1.66	-.34	.54
She prefers an ordinary meal. She is happy with meat and two vegetables.	4.26	1.86	-.54	-.41
She is easy about cooking. She uses a lot of ready-made products in her meals.	3.17	1.76	-.73	.14
Food does not bother her. She has no special demands on it.	3.27	1.83	-.78	-.08
She eats because she has to. Meals are not important to her.	2.75	1.72	-.79	-.10

867 *Notes:* n = 742. All items have been centered (rating scale: 1= not like me at all, 7=

868 very much like me). The common space coordinates have been mirrored on both axes.

869 Normalized Raw Stress .019

871 Table 3872 Results of multinomial logistic regression models predicting the food type affinities.

Predictor	Odds Ratio		
	Picture 2	Picture 3	Picture 4
	(efficient) (10%)	(gourmet) (33%)	(pure) (7%)
<u>Model 1</u>			
Likes to vary (promotion, highly involved)	1.05	1.31**	.96
Mindful of food (prevention, highly involved)	1.39*	1.17	1.96***
Prefers natural products (prevention, highly involved)	.89	1.31**	2.27***
Easy about cooking (promotion, lowly involved)	1.62**	1.03	.91
Prefers ordinary meal (prevention, lowly involved)	.76	.51***	.33***
<u>Model 2</u>			
Likes to vary (promotion, highly involved)	.99	1.29*	.95
Mindful of food (prevention, highly involved)	1.44*	1.11	1.89**
Prefers natural products (prevention, highly involved)	.97	1.27*	2.24***
Easy about cooking (promotion, lowly involved)	1.48*	.98	.89
Prefers ordinary meal (prevention, lowly involved)	.89	.56***	.38***

lowly involved)			
Age	.53 ^{***}	1.07	1.16
Level of education	1.50 ^{**}	1.55 ^{***}	1.74 ^{**}
Household size	1.07	.79 [*]	.98
Migrants	1.10	1.37 ^{**}	1.54 ^{**}

873 *Notes:* n = 742. The reference category is affinity for Picture 1; all predictors have

874 been standardized; Nagelkerke R^2 = .269 (model 1), .350 (model 2).

875 ^{*} p < .05. ^{**} p < .01. ^{***} p < .001.

876

877 Table 4878 Differences between the food type affinities for the predictor variables.

	Picture 1	Picture 2	Picture 3	Picture 4
	(conventional)	(efficient)	(gourmet)	(pure)
Likes to vary (promotion, highly involved)	-.10 _a	.06 _a	.40 _b	.60 _b
Mindful of food (prevention, highly involved)	-.09 _a	.20 _{ab}	.25 _b	1.01 _c
Prefers natural products (prevention, highly involved)	-.08 _a	-.18 _a	.32 _b	1.06 _c
Easy about cooking (promotion, lowly involved)	.19 _a	.67 _b	-.03 _c	-.33 _d
Prefers ordinary meal (prevention, lowly involved)	.44 _a	.33 _a	-.26 _b	-.59 _c
Age	.15 _a	-.43 _b	.20 _a	.43 _a
Level of education	-.17 _a	.51 _b	.35 _b	.73 _b
Household size	.15 _{ab}	.60 _a	-.04 _b	.24 _{ab}
Migrants	-.09 _a	.09 _{ab}	.34 _{bc}	.78 _c

879

880 *Notes:* $n = 742$. All predictors have been standardized ($M = 0$, $SD = 1$); means with881 different subscript letter differ significantly ($p < .05$) in one-way ANOVAs with

882 Bonferroni's post-hoc test.

883 Figure 1

884 Photos of the four types of foods (presented without text), from top left clockwise

885 picture 1 (conventional), 2 (efficient), 3 (gourmet) and 4 (pure).

889 Figure 2

890 Photos of the seven outlets (presented without text), from top left clockwise picture A

891 (regular supermarket), B (natural foods shop), C (outdoor market), D (ethnic market),

892 E (discount supermarket), F (take-away 'traiteur') and G (neighbourhood

893 supermarket).

894

895

896

897

898 Figure 3

899 Positions of the self-descriptions (FIFQ items) in the two dimensional framework of
 900 involvement and type of value motivation (results of multidimensional scaling, $n =$
 901 742, model = interval, normalized raw stress = .019, the items were mirrored on both
 902 axes).